SEISMOLOGICAL LABORATORY

CALIFORNIA INSTITUTE OF TECHNOLOGY

PASADENA, CALIFORNIA

LOCAL BULLETIN OF EARTHQUAKES IN THE SOUTHERN CALIFORNIA REGION

1 January 1963 to 31 December 1966

SEISMOLOGICAL LABORATORY

DIVISION OF GEOLOGICAL SCIENCES

CALIFORNIA INSTITUTE OF TECHNOLOGY

PASADENA, CALIFORNIA

LOCAL BULLETIN OF EARTHQUAKES IN THE SOUTHERN CALIFORNIA REGION

1 January 1963 to 31 December 1966

Charles F. Richter
John M. Nordquist
Violet Taylor
Clarence R. Allen, Editor

February 1967

Published with the assistance of the Earthquake Research Affiliates

STAFF OF THE SEISMOLOGICAL LABORATORY

February 1967

Clarence R. Allen	Interim Director and Professor of Geology and Geophysics
Charles F. Richter	Professor of Seismology
Don L. Anderson	Associate Professor of Geophysics
Charles B. Archambeau	Associate Professor of Geophysics
James N. Brune	Associate Professor of Geophysics
Stewart W. Smith	Associate Professor of Geophysics
Robert F. Roy	Senior Research Fellow
Lane R. Johnson	Research Fellow
Dan P. McKenzie	Research Fellow
Ta-liang Teng	Research Fellow
Francis T. Wu	Research Fellow
Francis E. Lehner	Senior Engineer
H. Thomas Baldwin	Research Assistant
Billy E. Barber	Engineering Draftsman
James L. Blayney	Associate Engineer, Research
John A. G. Dahlgren	General Machinist
David A. Downing	Junior Machinist
Gladys R. Engen	Junior Mathematician
William W. Gile	Associate Engineer, Development
Virginia Gilliam	Secretary
Ralph Gilman	Associate Engineer, Research
Jay Holsapple	Electronic Specialist
David Johnson	Technical Aide
Robert W. Kay	Senior Instrumentation Technician
Gertrude M. Killeen	Laboratory Assistant
Laszlo Lenches	Senior Research Assistant
Wayne F. Miller	Engineer, Electronics
Nathaniel Motta	Associate Engineer, Research
Virginia B. Murdoch	Junior Computing Analyst
John M. Nordquist	Associate Engineer, Research
Achille Papetti	Senior Instrument Specialist
John Romo	Instrumentation Technician
Roberta S. Rudelson	Administrative Aide
Ivar Sedleniek	Instrument Specialist
Barbara J. Sloan	Secretary
Elmer Steffensen	General Machinist
Roger B. Tait	Computing Analyst
Daniel A. Tanner	Senior Electronic Technician
Violet Taylor	Senior Seismology Assistant

The Local Bulletin of the Pasadena Seismological Laboratory has been issued regularly since the beginning of 1934, and the present Bulletin covers the four-year period from 1 January 1963 to 31 December 1966. The Bulletin was formerly issued on a quarterly basis, and the last Bulletin that was issued (for the first quarter of 1963) is repeated herein with some modifications.* The 29-year record of seismicity in the southern California region prior to 1 January 1963 was recently summarized by Allen et al (1965).

The Seismological Laboratory attempts to identify and locate all earthquakes of magnitude 3.0 and greater that occur within the area shown on Figures 1 and 2, with the exception that shocks south of the international border with Mexico are considered only when they equal or exceed magnitude 4.5. Some shocks in the magnitude 3 range are undoubtedly missed even near the boundaries of the area in California, but the coverage is felt to be essentially complete within the area interior to the seismograph net itself (Fig. 1). Within this area, numerous shocks of magnitudes less than 3.0 have been located and are listed in the accompanying table, but no claim is made for the statistical homogeneity of these smaller shocks. Every effort has been made to remove from the table non-seismic events such as the numerous large highway and mine blasts that occur almost daily in southern California. These rarely are rated as high as magnitude 3.0 when misidentified as earthquakes.

Virtually all of the earthquakes listed in this Bulletin have been located by electronic computer techniques using least-squares methods. Epicentral determinations for the first nine months of 1963 were carried out primarily by Dr. John K. Gardner, using an IBM 7090 program (Gardner, 1964). Most of the subsequent solutions have been by a very similar Bendix G-15D program written by Nordquist (1962; 1964). In both of these programs, three parallel plane layers are assumed using the crustal structure determined by Press (1960). Both P and S arrivals are used in the solutions, and more than 90% of the earthquakes for which computer locations have been attempted have yielded satisfactorily convergent solutions. Almost all solutions are based on seismographic data obtained solely from stations of the Pasadena network, although a few epicenters in the northernmost and southeasternmost parts of the area are indicated in the table as USCGS locations, which have utilized data from the Pasadena network as well as from stations outside of the region. Earthquakes of 1963 and 1964 for which felt reports were received by the USCGS have been summarized by Von Hake and Cloud (1965; 1966).

Figure 1 shows the locations of seismograph stations of the Pasadena network that were operative during the four-year period. More detailed station information is given in the list that follows. Figure 2 shows the locations of all shocks listed in the table that fall within the local area and are of magnitude 3.0 or greater, except in Mexico. Readers are cautioned against interpreting this map as a representation of seismic hazard or of future expectancy of earthquakes in this region; a single four-year period cannot be considered representative of long-term seismic activity. The problem of seismic hazard in the southern California region is discussed more fully by Richter (1959; 1964), Allen et al (1965), Housner (1965), and Albee and Smith (1966).

*The Bulletins were prepared and edited by C. F. Richter through 1962.

REFERENCES

Albee, A. L., and Smith, J. L., 1966, Earthquake characteristics and fault activity in southern California: Engineering geology of southern California, Assoc. Engineering Geologists, p. 9-33.

Allen, C. R., St. Amand, P., Richter, C. F., and Nordquist, J. M., 1965, Relationship between seismicity and geologic structure in the southern California region: Seismol. Soc. America Bull., v. 55, p. 753-797.

Gardner, J. K., 1964, Earthquakes in the Walker Pass region, California, and their relation to the tectonics of the southern Sierra Nevada: Unpub. Ph.D. thesis, California Inst. Technology.

Gutenberg, B., 1951, Revised travel times in southern California: Seismol. Soc. America Bull., v. 41, p. 143-163.

Housner, G. W., 1965, Intensity of earthquake ground shaking near the causative fault: Proc., Third World Conf. on Earthquake Engineering, Earthquake Res. Inst., Auckland, New Zealand, p. 1-16.

Nordquist, J. M., 1962, A special-purpose program for earthquake location with an electronic computer: Seismol. Soc. America Bull., v. 52, p. 431-437.

Nordquist, J. M., 1964, A catalog of southern California earthquakes, and associated electronic data processing: Seismol. Soc. America Bull., v. 54, p. 1003-1011.

Richter, C. F., 1959, Seismic regionalization: Seismol. Soc. America Bull., v. 49, p. 123-162.

Richter, C. F., 1964, Our earthquake risk: California Inst. Technology Quarterly, Jan. 1964, p. 2-11. Reprinted with addenda, 1965 and 1966.

Press, F., 1960, Crustal structure in the California-Nevada region: Jour. Geophys. Research, v. 65, p. 1039-1051.

Von Hake, C. A., and Cloud, W. K., 1965, United States earthquakes 1963: U. S. Coast and Geodetic Survey, 69 p.

Von Hake, C. A., and Cloud, W. K., 1966, United States earthquakes 1964: U. S. Coast and Geodetic Survey, 91 p.

STATION DATA

Stations in operation between 1-1-63 and 12-31-66

Abbreviations used in describing equipment:

N	North-south component
E	East-west component
Z	Vertical component
SP	Short-period Benioff characteristics (To = 1 sec; Tg = 0.2 sec)
LP	Long-period Benioff characteristics (To = 1 sec; Tg = 90 sec)
WA	Wood-Anderson torsion characteristics (To = 0.8 sec; V = 2800)
SM	Strong-motion characteristics (To = 0.8 sec; V = 4 to 125)

Instrumental data at some stations, as noted, are telemetered to Pasadena.

BARRETT (BAR): 32° 40.8' N, 116° 40.3' W; h = 510 m; Z SP; N,E,Z LP; N WA; Z SM (not standard); Operated since 1-17-52, with cooperation of City of San Diego, Water Department.

CHINA LAKE (CLC): 35° 49.0' N, 117° 35.8' W; h = 766 m; Z SP; Operated since 7-8-49, with cooperation of U.S. Naval Ordnance Test Station.

COTTONWOOD (CWC): 36° 26.3' N, 118° 04.7' W; h = 1620 m; Z SP; N,E WA; N,E,Z SM; Operated since 10-13-65, with cooperation of Los Angeles Department of Water and Power.

EL CENTRO (ECC): 32° 47.9' N, 115° 32.9' W; h = -15 m; N,E,Z SM; Operated since 11-28-56, with cooperation of Imperial Irrigation District.

FORT TEJON (FTC): 34° 52.4' N, 118° 53.6' W; h = 990 m; Z SP; Operated since 11-21-52, with cooperation of California Division of Beaches and Parks.

GLAMIS (GLA): 33° 03.1' N, 114° 49.6' W; h = 627 m; Z SP (telemetered to Pasadena); Operated since 12-20-66.

GOLDSTONE (GSC): 35° 18.1' N, 116° 48.3' W; h = 990 m; WWSSS equipment, plus Z SP (telemetered to Pasadena since 10-12-66); Operated since 11-7-61, with cooperation of Jet Propulsion Laboratory.

HAIWEE (HAI): 36° 08.2' N, 117° 56.8' W; h = 1150 m; Z SP; N,E WA; N,E,Z SM; Operated from 9-11-29 to 10-27-65, with cooperation of Los Angeles Department of Water and Power; station supplanted by Cottonwood in 1965 because of dam construction at Haiwee.

HAYFIELD (HAY): 33° 42.4' N, 115° 38.2' W; h = 439 m; Z SP; Z LP; Operated since 6-20-56, with cooperation of Metropolitan Water District of Southern California.

ISABELLA (ISA): 35° 38.6' N, 118° 28.6' W; h = 760 m; Z SP, plus 2 strain extensometers and 3 ultra-long-period pendulums in nearby tunnel; Operated since 1-6-54, with cooperation of U. S. Army Corps of Engineers.

KING RANCH (KRC): 35° 19.7' N, 119° 44.7' W; h = 670 m; Z SP; Operated from 10-16-52 to 12-3-65; discontinued because of abandonment of ranch by tenants.

MOUNT WILSON (MWC): 34° 13.4' N, 118° 03.5' W; h = 1730 m; Z SP; Operated since 4-23-28.

PALOMAR (PLM): 33° 21.2' N, 116° 51.7' W; h = 1692 m; Z SP (telemetered to Pasadena since 12-22-66); Operated since 9-7-39.

PASADENA (PAS): 34° 08.9'N, 118° 10.3' W; h = 295 m; N,E,Z SP; N,E,Z LP; N,E WA; N,E,Z SM; plus strain, Press-Ewing, and experimental instruments; Operated since 3-17-27.

RIVERSIDE (RVR): 33° 59.6' N, 117° 22.5' W; h = 260 m; Z SP; N,E,Z LP; N,E WA; N,E,Z SM; Operated since 10-19-26, with cooperation of City of Riverside.

SAN NICOLAS (SNC): 33° 14.9' N, 119° 31.4' W; h = 275 m; Z SP: Z LP; E WA; Operated since 7-24-57, with cooperation of U. S. Navy

SANTA BARBARA (SBC): 34° 26.5' N, 119° 42.8' W; h = 90 m; Z SP (telemetered to Pasadena since 6-1-66); N,E WA; N,E,Z SM; Operated since 5-10-27, with cooperation of Santa Barbara Museum of Natural History.

SAWMILL (SWM): 34° 43.1' N, 118° 34.9' W; h = 1220 m; Z SP (high magnification, high frequency, for micro-earthquake monitoring); N,E WA; E SM; Operated since 3-7-66, with cooperation of Sawmill Mountain Ranch (Mr. Bruce Tyler).

TINEMAHA (TIN): 37° 03.3' N, 118° 13.7' W; h = 1195 m; Z SP; N,E,Z LP; N,E WA; Operated since 9-4-29, with cooperation of Los Angeles Department of Water and Power.

WOODY (WDY): 35° 42.0' N, 118° 50.6' W; h = 500 m; Z SP; E WA; Operated since 8-5-52, with cooperation of Kern County Forestry and Fire Department.

EXPLANATION OF TABLE

DA H M S: These columns give the date, hour, minute, and second of the origin time of the earthquake, in Greenwich Civil Time (GCT). Pacific Standard Time can be obtained by subtracting 8 hours from the given time, Pacific Daylight Time by subtracting 7 hours. Note that this may change the date.

LAT N LONG W: Latitude and longitude of the epicenter, in degrees, minutes, and decimal parts of minutes.

Q: Quality of the epicentral determination, which varies depending on how well the earthquake was recorded and where it occurred relative to network stations.

A = specially investigated
B = epicenter probably within 5 km, origin time to nearest second
C = epicenter probably within 15 km, origin time to few seconds
D = epicenter not known within 15 km; rough location
No quality assigned to USCGS locations, which are reported to nearest 0.1 degree

MAG: Magnitude determined by average of magnitude determinations from Wood-Anderson seismographs at some or all of the following stations: BAR, CWC, HAI, PAS, RVR, SNC, SBC, SWM, TIN, WDY.

DEPTH: Depth in kilometers (+ is down) based on computer solution. An asterisk (*) in this column indicates that the hypocenter solution was at -2.0 km or above, which is usually the result of either (1) having assumed that late P arrivals at distant stations were first arrivals, or (2) having failed to correct for large thicknesses of low-velocity sediments in the hypocentral area. Where no depth is given, solution was based on travel-times for 16 km focal depth (Gutenberg, 1951).

QUADRANGLE: This is the 15' USGS quadrangle map sheet in which the epicenter lies, the name usually having been derived from the most prominent geographic feature in the area. (Index sheets are available free from the U. S. Geological Survey.) In Mexico, names have been arbitrarily assigned to 30' quadrangles based on prominent geographical features and are followed by "(M)" on the print-out. Likewise, quadrangles in Nevada are followed by "(N)" and Arizona by "(A)". For those few 15' quadrangles in California to which the USGS has not assigned a name, we have arbitrarily assigned names, usually that of one of the included 7½' quadrangles.

COMMENTS: Felt reports based upon data furnished by the USCGS (ESSA) are followed by "(ES)". Only locations of maximum reported intensity are given; intensities are on the Modified Mercalli scale of 1931. "(PR)" indicates a report by the press, and "(PH)" indicates a 'phone report to the Laboratory, usually also from a news office.

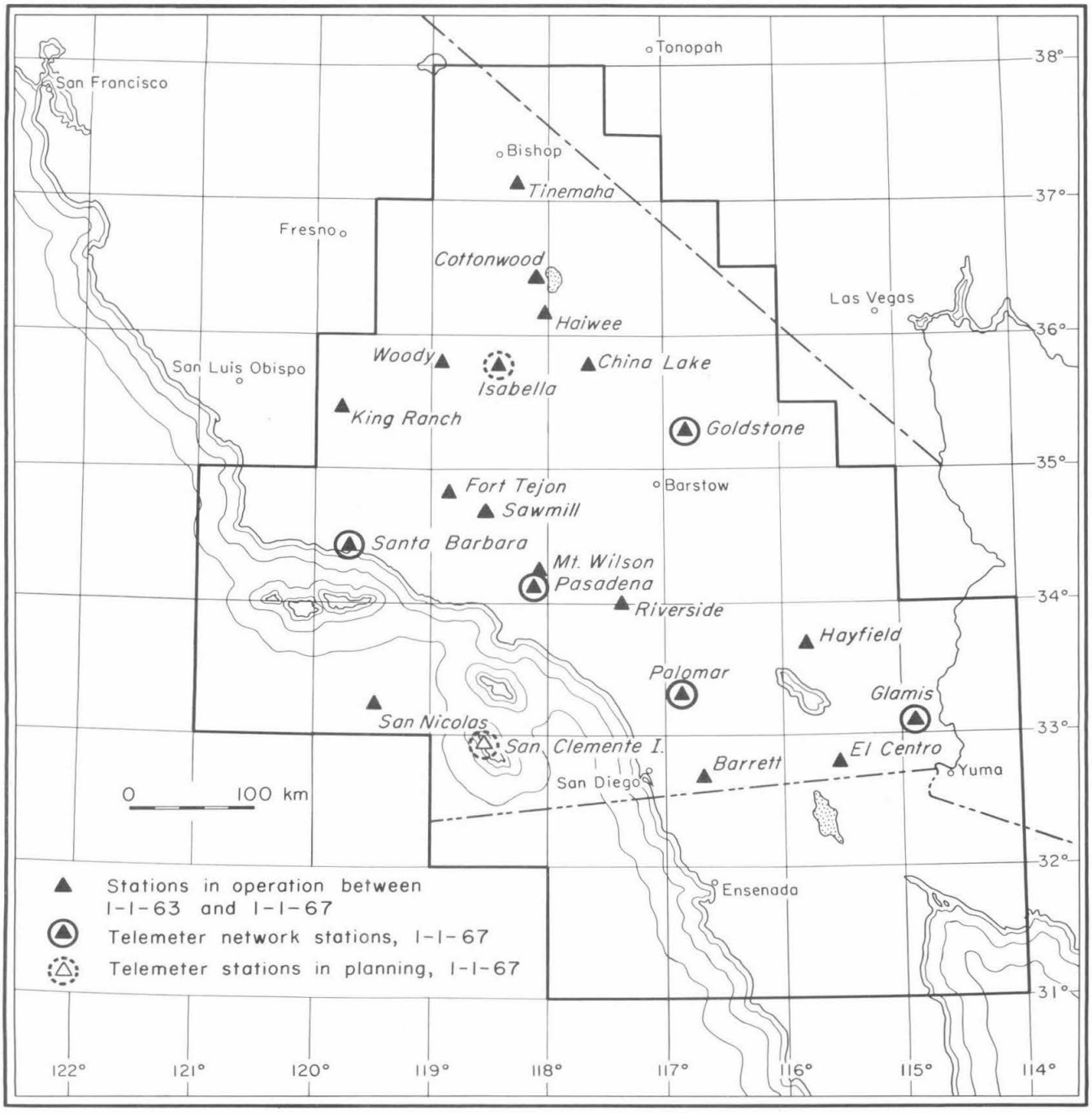
Tonopah
San Francisco
Bishop
Tinemaha
Fresno
Cottonwood
Haiwee
Las Vegas
Woody
China Lake
San Luis Obispo
Isabella
King Ranch
Goldstone
Fort Tejon
Barstow
Sawmill
Santa Barbara
Mt. Wilson
Pasadena
Riverside
Hayfield
Palomar
Glamis
San Nicolas
San Clemente I.
El Centro
Barrett
Yuma
San Diego
0 100 km
Ensenada
Stations in operation between 1-1-63 and 1-1-67
Telemeter network stations, 1-1-67
Telemeter stations in planning, 1-1-67
38°
37°
36°
35°
34°
33°
32°
31°
122°
121°
120°
119°
118°
117°
116°
115°
114°

Figure 1

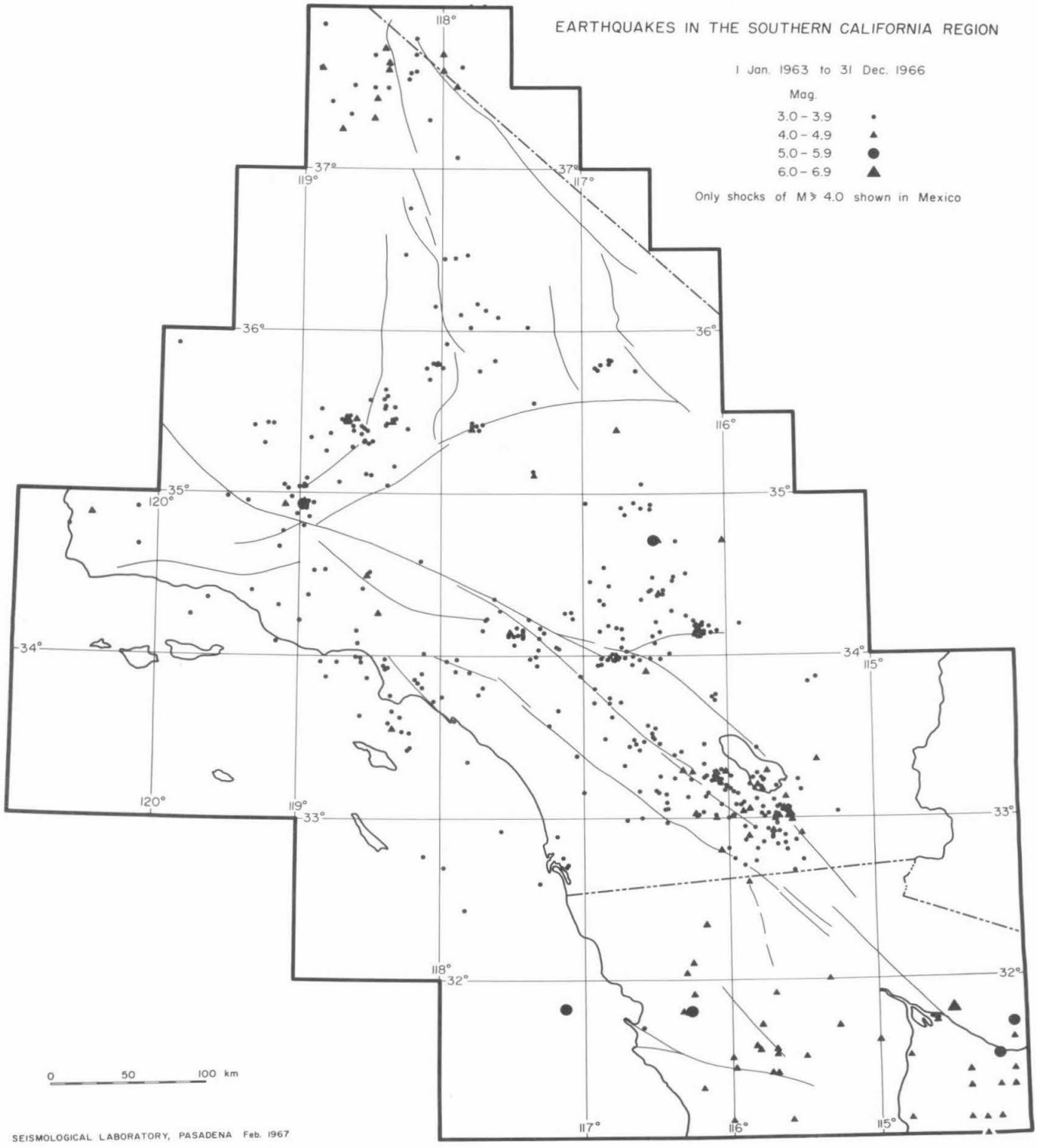
EARTHQUAKES IN THE SOUTHERN CALIFORNIA REGION
1 Jan. 1963 to 31 Dec. 1966
Mag.
3.0 – 3.9
4.0 – 4.9
5.0 – 5.9
6.0 – 6.9
Only shocks of M ⩾ 4.0 shown in Mexico
118°
37°
119°
117°
36°
116°
35°
120°
34°
115°
33°
32°
0 50 100 km
SEISMOLOGICAL LABORATORY, PASADENA Feb. 1967

Figure 2

EARTHQUAKES IN SOUTHERN CALIFORNIA REGION, JAN, 1963

DA	H	M	S	LAT N	LONG W	Q	MAG	DEPTH	QUADRANGLE
1	18	37	49.5	36 4.4	117 57.8	B	2.9	5.1	HAIWEE RESERVOIR
1	18	50	6.6	33 58.3	118 22.8	B	2.0	5.3	TORRANCE
9	6	4	3.8	34 55.3	119 6.2	B	4.0	8.7	CUDDY VALLEY
			(III) AT WHEELER RIDGE (ES)						
11	18	45	54.0	32 24.0	116 36.0	D	3.6		DESCANSO (M)
12	3	34	43.6	34 15.7	117 4.2	C	2.7	*	LAKE ARROWHEAD
12	19	52	34.0	32 12.0	116 6.0	D	3.8		SIERRA JUAREZ NW (M)
13	2	39	38.9	33 1.3	116 13.4	B	4.2	13.0	BORREGO MTN
			(III) IN SAN DIEGO (ES)						
13	7	56	34.0	34 16.0	117 5.0	B	2.7		LAKE ARROWHEAD
13	20	45	18.0	33 1.0	116 13.0	B	3.9		BORREGO MTN
13	20	47	24.8	33 1.2	116 12.7	B	3.0	12.5	BORREGO MTN
13	21	9	19.0	33 1.0	116 13.0	B	3.4		BORREGO MTN
14	1	33	31.0	33 1.0	116 13.0	B	3.4		BORREGO MTN
15	16	35	42.7	34 7.3	117 37.5	B	2.4	1.2	ONTARIO
16	12	51	8.4	34 15.9	117 5.0	B	3.4	7.2	LAKE ARROWHEAD
16	14	39	22.3	34 15.6	117 6.9	B	2.7	6.8	LAKE ARROWHEAD
16	21	1	25.4	34 16.6	117 3.9	B	2.9	8.1	LAKE ARROWHEAD
18	21	12	37.0	37 18.0	118 6.0	C	3.3		BLANCO MTN
25	5	39	59.0	33 1.0	116 13.0	B	3.5		BORREGO MTN
25	6	33	35.0	33 1.0	116 13.0	B	3.4		BORREGO MTN
27	3	0	39.0	31 36.0	115 42.0		4.9		SIERRA JUAREZ SE (M)
			(IV) IN SAN DIEGO (ES)						
27	3	25	30.0	31 36.0	115 42.0	D	3.7		SIERRA JUAREZ SE (M)
31	5	54	30.0	32 6.0	115 48.0	D	3.8		LAGUNA SALADA (M)
31	7	54	40.9	33 54.5	118 21.0	B	2.6	*	TORRANCE
			(IV) IN INGLEWOOD (ES)						

FEB, 1963

1	15	28	0.0	35 19.4	118 34.2	B	2.9	*	BRECKENRIDGE MTN
3	15	28	12.8	35 26.8	118 24.9	B	2.8	0.9	EMERALD MTN
11	1	7	53.9	34 14.9	116 52.4	B	2.6	2.2	SAN GORGONIO MTN
12	21	45	49.0	34 54.5	118 58.8	B	3.5	9.9	FRAZIER MTN
18	16	58	53.1	33 55.4	118 22.5	B	3.4	9.9	TORRANCE
			FELT, SANTA MONICA, MANHATTAN BEACH, BEVERLY HILLS, WESTCHESTER, COMPTON						
19	19	1	21.0	32 25.0	115 5.0	C	3.7		SIERRA CUCAPA (M)
21	11	44	42.0	31 42.0	115 54.0	D	3.8		SIERRA JUAREZ SE (M)
22	1	52	51.0	32 55.0	117 30.0	C	2.9		GULF OF SANTA CATALINA
22	15	56	36.0	35 40.0	120 50.0	D	3.6		ADELAIDA
27	9	13	39.6	34 17.9	116 50.9	B	2.6	2.6	LUCERNE VALLEY
27	12	57	52.4	36 7.9	118 4.2	B	2.8	4.5	MONACHE MTN
27	16	45	8.0	33 15.0	115 35.0	C	2.7		FRINK
27	20	7	7.0	35 6.3	118 56.3	B	2.6	5.8	ARVIN

MAR, 1963

1	0	25	57.9	34 55.9	118 58.5	B	5.0	13.9	FRAZIER MTN
			FELT GENERALLY, LOS ANGELES METROPOLITAN AREA TO ARVIN						
			(VI) AT FORT TEJON, FRAZIER PARK AND TAFT (ES)						
2	20	38	30.9	34 18.0	116 49.4	B	2.9	1.8	LUCERNE VALLEY
4	14	48	31.6	34 57.0	118 56.2	B	3.1	5.8	FRAZIER MTN
4	20	10	42.3	34 56.7	118 58.1	B	4.0	8.5	FRAZIER MTN

EARTHQUAKES IN SOUTHERN CALIFORNIA REGION, MAR, 1963

DA	H	M	S	LAT N	LONG W	Q	MAG	DEPTH	QUADRANGLE
8	14	29	21.7	32 58.1	116 25.5	B	3.0	13.5	MT LAGUNA
10	9	32	3.9	34 18.9	116 51.3	B	3.0	*	LUCERNE VALLEY
11	6	7	0.9	33 45.2	118 21.2	B	3.0	6.4	TORRANCE
			(IV) AT HAWTHORNE, MANHATTAN BEACH, AND TORRANCE (ES)						
11	6	45	39.0	35 19.1	118 34.9	B	2.6	*	BRECKENRIDGE MTN
12	18	6	30.9	33 37.7	117 53.5	B	2.3	7.0	SANTA ANA
14	12	23	47.2	35 22.0	118 47.5	B	3.2	6.9	BAKERSFIELD EAST
			(IV) AT BAKERSFIELD (ES)						
15	20	27	54.7	34 6.5	117 37.6	B	2.5	6.5	ONTARIO
16	9	35	54.0	34 20.4	116 53.1	B	3.5	7.5	LUCERNE VALLEY
16	12	15	12.6	34 19.6	116 52.9	B	2.6	2.7	LUCERNE VALLEY
17	10	10	53.0	34 19.6	119 11.5	C	2.8	16.5	SANTA PAULA
20	15	58	18.5	34 4.7	117 57.2	B	2.3	4.9	POMONA
			FELT, HOLLYWOOD HILLS (RADIO KNX)						
20	23	15	15.0	31 30.0	116 0.	D	4.0		SANTO TOMAS (M)
22	10	36	6.0	31 30.0	116 0.	D	3.9		SANTO TOMAS (M)
22	22	3	33.6	33 22.6	118 21.6	B	2.4	16.7	SANTA CATALINA EAST
23	0	13	38.4	34 19.4	116 51.9	B	2.6	1.2	LUCERNE VALLEY
23	0	19	7.6	34 19.7	116 55.8	B	2.5	7.1	LUCERNE VALLEY
23	14	9	29.1	33 57.0	118 12.1	B	2.5	7.9	DOWNEY
24	17	31	38.6	34 54.7	116 33.1	B	2.8	*	NEWBERRY
27	20	30	27.9	35 48.0	118 1.5	B	3.0	*	LAMONT PEAK
30	18	28	15.8	33 59.2	116 46.2	C	3.2	1.1	BANNING

APR, 1963

1	23	28	56.8	34 0.2	118 20.8	B	2.4	7.8	HOLLYWOOD
			FELT IN DOWNTOWN LOS ANGELES (PH)						
2	21	21	0.	34 0.	118 21.0	C	1.7		HOLLYWOOD
			FELT, LA CIENAGA AREA						
3	5	17	24.0	31 42.0	115 48.0	D	4.0		SIERRA JUAREZ SE (M)
10	12	54	19.9	33 9.3	116 8.5	C	3.2	18.3	BORREGO MTN
11	23	54	0.	34 20.0	116 52.0	B	2.8		LUCERNE VALLEY
12	5	20	44.4	34 54.5	118 57.1	B	3.9	12.8	FRAZIER MTN
			FELT IN LA CIENAGA AREA (PH)						
19	3	21	9.7	35 46.3	117 59.5	B	3.6	5.4	LITTLE LAKE
19	6	19	17.0	31 54.0	115 42.0	D	4.2		SIERRA JUAREZ SE (M)
19	10	44	40.9	34 21.4	116 55.6	B	2.8	8.5	LUCERNE VALLEY
21	13	46	33.8	35 23.0	118 37.6	B	3.2	-1.0	BRECKENRIDGE MTN
21	13	52	4.0	35 23.6	118 37.5	B	2.8	0.1	BRECKENRIDGE MTN
21	15	30	20.9	35 47.8	118 2.3	B	3.3	10.0	LAMONT PEAK
26	1	3	42.0	32 36.0	115 42.0	D	4.0		HEBER
26	13	18	23.4	34 2.5	117 35.9	B	2.7	9.2	ONTARIO
27	3	24	54.0	32 12.0	116 30.0	D	3.7		DESCANSO (M)
30	2	32	58.1	34 1.2	118 7.0	B	3.2	*	PASADENA
			(IV) IN ALTADENA, GLENDALE, SOUTH PASADENA, AND TUJUNGA (ES)						

MAY, 1963

1	20	12	12.0	31 30.0	115 30.0	D	4.0		SIERRA JUAREZ SE (M)
3	1	28	6.0	37 37.0	118 54.0	C	3.2		MT MORRISON
3	1	54	16.0	37 37.0	118 54.0	C	3.3		MT MORRISON
3	2	14	44.1	37 36.7	118 53.6	C	4.2	*	MT MORRISON
3	8	42	46.0	37 37.0	118 54.0	C	3.8		MT MORRISON

EARTHQUAKES IN SOUTHERN CALIFORNIA REGION, MAY, 1963

DA	H	M	S	LAT N	LONG W	Q	MAG	DEPTH	QUADRANGLE
3	17	29	1.0	37 37.0	118 54.0	C	3.8		MT MORRISON
3	17	37	10.0	37 37.0	118 54.0	C	3.6		MT MORRISON
4	3	58	35.0	37 37.0	118 54.0	C	3.4		MT MORRISON
4	14	17	37.1	34 24.7	118 33.1	B	3.2	11.1	SANTA SUSANA
5	13	51	48.5	33 54.0	117 53.8	B	3.0	1.5	ANAHEIM
6	10	6	52.1	34 13.6	119 28.4	B	2.8	11.7	ANACAPA I NORTH
7	10	13	28.0	33 56.2	118 26.4	B	2.5	3.1	TORRANCE
7	19	49	26.2	33 54.8	118 23.4	B	3.3	3.4	TORRANCE
			(V) AT HAWTHORNE, HERMOSA BEACH, AND MANHATTAN BEACH (ES)						
7	21	30	15.0	33 55.0	118 23.0	C	2.5		TORRANCE
			FELT, LAWNDALE, INGLEWOOD						
8	0	46	59.1	33 55.7	118 20.9	B	2.7	17.1	TORRANCE
			FELT, INGLEWOOD, WESTCHESTER, ETC						
8	4	20	27.3	33 56.5	118 18.5	B	2.3	9.4	TORRANCE
			FELT, INGLEWOOD AREA						
11	12	12	8.4	33 27.8	116 32.6	B	2.7	3.8	WARNER SPRINGS
14	4	54	23.8	31 59.0	115 57.3	C	3.5	*	SIERRA JUAREZ SE (M)
14	13	35	30.9	31 26.0	115 58.5	C	4.2	*	VALLE TRINIDAD (M)
14	22	55	34.3	33 51.4	118 21.5	B	2.8	8.0	TORRANCE
			(IV) MANHATTAN BEACH (ES)						
15	4	48	18.0	33 55.0	118 23.0	C	2.7		TORRANCE
			FELT, HERMOSA BEACH						
17	16	59	11.1	34 18.5	119 8.6	B	3.1	4.6	SANTA PAULA
			FELT, OXNARD, VENTURA, (V) AT SATICOY						
22	23	8	5.0	32 50.0	115 40.0		3.3		BRAWLEY
23	0	5	58.6	34 31.0	118 56.7	B	2.7	13.7	COBBLESTONE MTN
23	6	36	35.7	32 54.9	115 41.8	B	4.3	1.2	BRAWLEY
			FELT, BRAWLEY AREA						
23	6	40	31.0	33 0.	115 41.0	C	3.3		CALIPATRIA
			FELT, BRAWLEY AREA						
23	6	42	50.2	33 0.2	115 40.7	B	3.8	-0.8	CALIPATRIA
			FELT, BRAWLEY AREA						
23	9	6	4.7	32 58.9	115 33.9	B	4.6	25.4	BRAWLEY
			FELT, BRAWLEY AREA						
23	14	2	26.0	33 0.	115 40.0	D	3.3		CALIPATRIA
23	14	14	51.3	33 2.5	115 36.2	C	3.3	*	CALIPATRIA
23	15	53	1.8	33 1.6	115 40.9	B	4.8	0.4	CALIPATRIA
			(VI) AT BRAWLEY AND WESTMORLAND (ES)						
23	16	16	57.5	32 52.6	115 42.0	B	3.3	2.7	BRAWLEY
23	16	48	45.0	33 0.	115 40.0	D	3.1		CALIPATRIA
23	17	4	29.0	33 0.	115 40.0	D	3.5		CALIPATRIA
23	17	42	29.0	33 0.	115 40.0	D	3.5		CALIPATRIA
23	18	36	39.0	33 0.	115 40.0	D	3.5		CALIPATRIA
23	18	40	7.0	33 0.	115 40.0	D	3.7		CALIPATRIA
26	2	16	7.3	33 57.6	118 43.6	B	3.4	12.8	SANTA MONICA BAY
28	11	37	54.5	34 56.0	118 59.0	B	3.6	12.3	FRAZIER MTN
31	6	15	49.0	33 20.0	116 10.0		3.0		RABBIT PEAK

JUN, 1963

1	5	19	0.2	34 20.0	119 32.5	B	2.0	15.2	SANTA BARBARA
1	9	55	53.0	33 0.	116 36.0	D	3.0		SANTA YSABEL
5	0	24	44.8	33 56.3	116 39.5	B	3.0	14.3	PALM SPRINGS
7	10	26	10.7	33 51.7	118 31.0	B	3.5	3.8	SANTA MONICA BAY
			FELT, WEST LOS ANGELES, CULVER CITY, INGLEWOOD, HERMOSA BEACH, REDONDO BEACH						

EARTHQUAKES IN SOUTHERN CALIFORNIA REGION, JUN, 1963

DA	H	M	S	LAT N	LONG W	Q	MAG	DEPTH	QUADRANGLE
11	15	23	38.3	31 47.8	116 16.1	C	5.8	*	SANTO TOMAS (M)
			(V) LA JOLLA TO EL CENTRO (ES)						
11	15	30	24.0	31 48.0	116 16.0	D	3.7		SANTO TOMAS (M)
11	15	49	48.0	31 48.0	116 16.0	D	4.0		SANTO TOMAS (M)
12	8	55	36.0	31 48.0	116 16.0	D	4.0		SANTO TOMAS (M)
12	22	15	16.9	31 47.5	116 20.1	C	4.8	8.8	SANTO TOMAS (M)
			FELT, SAN DIEGO						
12	22	15	56.0	31 48.0	116 16.0		4.7		SANTO TOMAS (M)
			FELT, SAN DIEGO						
20	2	18	48.9	33 31.3	116 36.5	C	3.0	13.1	IDYLLWILD
20	4	46	8.0	31 48.0	116 16.0		4.0		SANTO TOMAS (M)
20	12	6	30.5	34 1.8	118 26.6	C	2.7	3.4	HOLLYWOOD
			FELT, WEST LOS ANGELES, LA CIENAGA (PR)						
21	6	8	15.9	33 48.2	117 50.8	B	2.2	7.1	ANAHEIM
21	17	0	36.1	33 5.6	116 25.8	B	3.5	12.7	BORREGO
21	23	26	23.1	34 22.9	117 3.0	B	3.3	1.0	LAKE ARROWHEAD
21	23	38	8.4	34 12.8	118 59.5	B	3.7	13.1	TRIUNFO PASS
			STRONG AT SANTA PAULA, SOME REPORTS OF BROKEN PIPES (PR)						
			FELT IN VENTURA (STATION KVEN)						
23	17	54	5.0	34 25.0	117 0.		2.7		LAKE ARROWHEAD
23	19	55	8.9	34 30.7	118 30.2	B	3.2	7.7	LIEBRE MTN
25	7	43	33.0	33 15.0	116 10.0		3.3		RABBIT PEAK
26	10	14	48.2	35 5.1	118 47.6	C	2.6	7.4	ARVIN
26	12	30	47.8	34 5.1	117 20.6	B	2.6	15.1	SAN BERNARDINO

JUL, 1963

2	12	0	24.9	34 51.7	119 48.1	C	2.0	15.3	MCPHERSON PEAK
4	3	20	41.0	34 46.3	120 1.0	C	3.2	20.0	TEPUSQUET PEAK
5	8	27	11.5	34 11.6	116 12.7	B	3.2	*	TWENTYNINE PALMS
5	14	58	31.1	33 10.3	116 1.6	C	3.2	*	BORREGO MTN
6	16	11	8.9	34 16.6	116 22.7	B	3.1	4.3	EMERSON LAKE
6	23	32	30.4	34 47.2	120 37.6	B	3.3	1.9	POINT SAL
7	1	19	52.0	34 25.2	117 53.1	B	1.8	13.5	VALYERMO
7	3	57	14.3	33 34.1	117 14.6	B	3.0	11.2	MURRIETA
7	16	2	54.4	33 40.9	117 30.2	B	2.6	1.7	SANTIAGO PEAK
13	16	22	14.1	33 13.6	116 9.9	C	2.8	*	BORREGO MTN
16	9	18	22.7	34 8.6	116 10.8	B	3.0	1.8	TWENTYNINE PALMS
			FELT, TWENTYNINE PALMS (ES)						
17	4	21	23.2	35 19.1	118 35.4	B	2.7	21.0	BRECKENRIDGE MTN
17	20	44	35.0	34 6.9	116 11.9	C	3.2	5.7	TWENTYNINE PALMS
			FELT, TWENTYNINE PALMS						
17	23	5	42.2	34 9.5	116 3.8	B	3.4	*	TWENTYNINE PALMS
			(III) TWENTYNINE PALMS (ES)						
17	23	11	6.9	34 10.1	116 11.9	B	3.5	2.7	TWENTYNINE PALMS
			(III) AT TWENTYNINE PALMS (ES)						
18	10	40	31.2	34 11.2	116 7.7	B	3.5	7.7	TWENTYNINE PALMS
			FELT, TWENTYNINE PALMS (ES)						
18	19	37	44.7	34 12.1	116 10.0	B	3.9	11.6	TWENTYNINE PALMS
			(V) TWENTYNINE PALMS (ES)						
19	8	33	54.1	34 11.0	116 10.7	B	3.3	*	TWENTYNINE PALMS
19	15	54	57.0	34 9.3	116 9.4	B	3.6	14.2	TWENTYNINE PALMS
			FELT, TWENTYNINE PALMS (ES)						
20	1	45	18.0	32 0.	116 0.	D	4.2		SIERRA JUAREZ NW (M)

EARTHQUAKES IN SOUTHERN CALIFORNIA REGION, JUL, 1963

DA	H	M	S	LAT N	LONG W	Q	MAG	DEPTH	QUADRANGLE
21	18	35	47.3	33 37.8	116 48.1	B	3.0	13.0	HEMET
24	10	50	2.5	35 2.8	118 23.0	B	3.3	7.3	TEHACHAPI
			WAKENED SLEEPERS AT TEHACHAPI						
24	11	41	52.8	34 11.1	116 11.0	B	3.3	-1.2	TWENTYNINE PALMS
26	7	33	51.5	34 2.3	117 19.4	A	3.6	18.9	SAN BERNARDINO
			(III) COLTON (ES)						
30	6	34	57.3	34 9.2	116 12.6	B	4.7	12.9	TWENTYNINE PALMS
			(V) TWENTYNINE PALMS (ES)						
30	9	31	14.4	34 11.2	116 12.9	B	3.0	2.5	TWENTYNINE PALMS
30	10	25	24.7	34 10.5	116 11.3	B	3.1	*	TWENTYNINE PALMS
30	17	28	25.1	34 8.5	116 6.7	B	3.0	*	TWENTYNINE PALMS
30	17	47	42.5	34 9.2	116 11.2	B	3.3	2.6	TWENTYNINE PALMS
30	19	14	53.1	34 4.6	116 13.3	C	2.6	4.4	TWENTYNINE PALMS
30	22	45	57.1	34 10.0	116 11.0	B	3.4	*	TWENTYNINE PALMS
				AUG, 1963					
1	14	57	20.6	34 10.0	116 10.0	B	2.9	-1.6	TWENTYNINE PALMS
3	15	15	49.5	34 8.4	116 9.7	B	3.0	4.2	TWENTYNINE PALMS
6	16	45	39.5	35 19.7	118 32.5	C	3.2	11.0	BRECKENRIDGE MTN
6	18	36	17.0	33 45.8	117 44.2	C	3.0	9.6	CORONA
6	23	38	45.6	33 47.6	116 55.2	C	3.4	*	BANNING
9	8	13	19.5	33 51.1	118 10.8	B	3.2	7.4	DOWNEY
14	17	48	8.1	34 10.8	117 41.0	B	2.6	6.5	ONTARIO
15	21	2	33.8	36 6.0	121 6.0		4.2		KING CITY
			EPICENTER BY USCGS						
15	21	21	33.1	35 54.0	121 6.0		4.2		BRYSON
			EPICENTER BY USCGS						
18	7	7	31.3	33 55.4	116 39.6	B	2.8	11.7	PALM SPRINGS
18	12	6	18.5	33 42.0	117 55.0	C	2.6		SANTA ANA
21	17	1	46.6	34 57.3	119 22.0	B	3.0	*	CUYAMA PEAK
22	4	33	55.9	34 9.4	116 11.6	B	4.4	5.8	TWENTYNINE PALMS
22	4	49	23.1	34 9.4	116 12.5	B	2.9	0.3	TWENTYNINE PALMS
22	5	32	42.7	34 7.8	116 12.4	B	2.6	1.3	TWENTYNINE PALMS
22	12	13	11.2	33 43.0	118 3.1	B	3.5	3.8	LAS BOLSAS
			(V) IN LOS ANGELES (ES)						
22	12	23	8.0	33 49.0	117 57.3	C	2.1	13.1	ANAHEIM
22	12	28	19.7	33 48.8	117 56.5	C	2.0	10.2	ANAHEIM
23	19	37	12.2	33 49.0	117 57.9	C	2.4	11.0	ANAHEIM
24	10	49	6.9	36 7.7	117 41.3	B	3.4	8.1	COSO PEAK
24	13	28	20.8	34 7.0	116 11.1	B	3.1	6.8	TWENTYNINE PALMS
24	19	58	34.4	36 10.0	117 38.4	C	3.3	2.0	COSO PEAK
24	20	47	49.5	32 20.0	116 10.2	D	4.1	4.8	SIERRA JUAREZ NW (M)
25	5	50	57.6	34 15.9	118 28.8	C	2.5	8.7	SAN FERNANDO
25	6	7	53.7	33 48.1	117 58.8	B	2.7	5.7	ANAHEIM
26	22	45	59.2	36 5.8	117 51.4	C	2.3	10.9	HAIWEE RESERVOIR
27	1	21	1.8	32 1.9	116 18.5	C	4.0	14.6	SIERRA JUAREZ NW (M)
			(IV) IN DESCANSO, (III) IN SAN DIEGO (ES)						
27	9	31	48.7	34 8.3	119 1.1	C	2.6	-1.9	HUENEME
28	6	56	59.0	34 6.6	118 28.2	C	2.4	24.1	HOLLYWOOD
28	12	16	42.2	33 53.7	118 29.4	B	2.8	6.5	TORRANCE
30	11	21	4.4	34 7.6	116 13.7	B	3.0	1.5	TWENTYNINE PALMS
31	19	11	29.8	35 4.3	118 43.4	B	3.4	6.8	CUMMINGS MTN

EARTHQUAKES IN SOUTHERN CALIFORNIA REGION, SEP, 1963

DA	H	M	S	LAT N	LONG W	Q	MAG	DEPTH	QUADRANGLE
1	19	43	51.6	35 20.5	118 31.2	B	2.9	-1.5	BRECKENRIDGE MTN
6	0	44	18.2	33 52.6	117 1.4	B	3.3	10.8	PERRIS
9	17	45	48.6	33 30.0	116 31.1	B	3.3	3.4	WARNER SPRINGS
12	18	42	21.9	34 1.7	117 34.9	B	2.1	8.1	ONTARIO
14	3	51	16.2	33 32.6	118 20.4	B	4.2	2.2	SAN PEDRO
			(V) IN LONG BEACH AND ON PALOS VERDES PENINSULA (ES)						
14	4	15	39.9	33 34.9	118 17.4	B	3.4	9.4	SAN PEDRO
			FELT, LONG BEACH AND SAN PEDRO (PH)						
14	6	57	55.9	33 37.5	118 17.4	C	2.6	15.3	SAN PEDRO
14	12	28	13.6	35 47.3	118 0.8	B	3.4	4.9	LAMONT PEAK
14	18	19	41.5	33 36.0	118 24.5	C	2.9	1.9	SAN PEDRO
15	10	48	1.4	35 47.5	118 1.3	B	3.2	4.4	LAMONT PEAK
17	4	26	59.1	34 16.1	118 28.9	B	2.4	5.4	SAN FERNANDO
17	4	29	44.0	34 21.9	118 25.4	B	2.5	*	SAN FERNANDO
17	19	57	29.7	34 15.9	118 30.4	B	2.4	6.0	SANTA SUSANA
18	0	9	31.2	33 55.9	117 49.6	B	2.9	8.0	ANAHEIM
21	5	5	59.8	35 24.7	117 47.3	B	3.1	7.6	SALTDALE
22	0	34	42.1	33 58.5	117 53.2	B	3.3	9.9	ANAHEIM
22	3	15	40.2	33 38.0	117 56.6	B	2.9	*	SANTA ANA
22	3	16	39.1	33 38.7	118 0.4	C	2.6	12.9	LAS BOLSAS
22	8	6	6.8	33 36.8	117 59.7	B	2.7	*	SANTA ANA
22	8	26	49.4	33 38.2	117 56.7	B	2.6	*	SANTA ANA
22	17	57	7.3	34 44.8	118 55.3	B	2.8	4.1	COBBLESTONE MTN
23	14	1	17.6	34 15.6	116 31.4	B	2.7	6.5	OLD WOMAN SPRINGS
23	14	41	52.6	33 42.6	116 55.5	B	5.0	16.5	HEMET
			(VI) AT ANZA, HEMET, SAN JACINTO, HOMELAND, WILDOMAR, AND WINCHESTER (ES)						
23	15	15	36.2	34 15.8	116 30.1	B	2.7	7.5	OLD WOMAN SPRINGS
24	5	58	23.1	34 15.2	116 25.2	B	2.6	4.6	EMERSON LAKE
24	14	9	45.9	33 1.3	116 56.2	C	2.3	*	RAMONA
24	18	42	25.0	33 54.4	117 15.9	B	2.8	10.5	RIVERSIDE
			FELT, RIVERSIDE (PH)						
24	18	47	34.6	33 55.7	117 17.8	B	2.3	14.8	RIVERSIDE
25	8	37	38.0	33 26.2	118 12.8	B	3.8	13.5	GULF OF SANTA CATALINA
			FELT BY A FEW IN PASADENA (PH)						
25	11	26	31.3	33 25.3	118 14.1	B	3.8	-0.5	GULF OF SANTA CATALINA
26	17	25	59.9	34 15.7	117 7.8	C	3.4	*	LAKE ARROWHEAD
27	16	46	14.5	33 1.7	115 43.7	B	3.8	9.9	CALIPATRIA
			FELT, BRAWLEY (PR)						
28	7	46	35.7	33 22.9	117 56.6	B	2.7	10.4	GULF OF SANTA CATALINA
29	15	12	46.0	34 13.1	118 32.5	B	2.5	-0.6	CALABASAS

OCT, 1963

4	15	33	39.1	33 56.4	116 54.0	C	3.1	*	BANNING
8	23	2	42.2	33 39.5	117 10.9	B	3.7	7.2	MURRIETA
			(IV) WILDOMAR (ES) (REPORTED AS 1604 PST)						
13	0	40	37.5	33 54.2	116 28.9	B	2.9	11.4	THOUSAND PALMS
13	1	56	0.8	33 32.3	118 21.8	B	2.7	6.3	SAN PEDRO
13	14	18	8.0	32 0.	115 48.0	D	3.5		LAGUNA SALADA (M)
16	23	48	1.2	34 45.9	119 6.9	B	3.1	10.8	CUDDY VALLEY
20	13	29	27.0	31 6.0	115 36.0		5.0		VALLE TRINIDAD (M)
			EPICENTER BY USCGS						
20	16	30	0.	31 48.0	115 54.0		3.5		SIERRA JUAREZ SE (M)

EARTHQUAKES IN SOUTHERN CALIFORNIA REGION, OCT, 1963

DA	H	M	S	LAT N	LONG W	Q	MAG	DEPTH	QUADRANGLE
25	15	5	23.0	35 23.3	116 45.7	B	4.0	2.8	GOLDSTONE LAKE
			FELT SHARPLY AT GOLDSTONE (PH)						
27	14	50	23.4	33 17.0	115 44.1	C	4.0	*	FRINK
			FELT, NILAND (BSSA, APRIL 1964)						
27	14	52	45.2	33 12.0	115 38.0	C	4.1	*	CALIPATRIA
27	14	56	54.3	33 21.3	115 23.3	C	4.1	7.6	IRIS PASS
			FELT, NILAND (BSSA, APRIL 1964)						
27	14	58	22.4	32 53.1	115 51.9	C	4.4	*	PLASTER CITY
27	15	24	13.3	33 4.0	115 39.9	C	3.2	2.7	CALIPATRIA
27	15	30	44.9	33 14.2	115 45.5	C	3.1	*	KANE SPRING
27	17	49	15.9	33 11.7	115 40.4	C	3.0	1.4	CALIPATRIA
27	17	52	23.6	33 6.9	115 48.6	C	3.7	-0.1	KANE SPRING
27	18	7	46.9	33 14.9	115 46.3	C	3.7	5.4	KANE SPRING
27	18	12	50.7	33 7.8	115 36.7	C	4.2	7.8	CALIPATRIA
			FELT, NILAND (BSSA, APRIL 1964)						
27	18	22	7.1	33 15.0	115 49.9	C	3.5	*	KANE SPRING
			FELT, NILAND (BSSA, APRIL 1964)						
27	18	49	39.0	33 16.7	115 38.2	C	3.8	15.9	FRINK
27	19	38	17.4	33 14.2	115 45.5	C	3.4	*	KANE SPRING
27	20	27	31.2	34 27.8	116 22.4	B	3.0	-1.1	EMERSON LAKE
27	20	36	6.1	33 32.0	118 16.3	B	3.5	4.8	SAN PEDRO
28	0	30	41.0	33 10.5	115 30.2	C	3.5	1.4	CALIPATRIA
28	5	35	15.9	35 59.5	117 54.8	B	2.7	*	LITTLE LAKE
28	8	14	17.1	33 10.5	115 45.8	C	4.0	0.9	KANE SPRING
28	15	55	43.2	33 26.1	115 48.3	C	3.6	2.2	DURMID
28	20	13	48.9	33 14.2	115 45.5	C	3.8	*	KANE SPRING
28	20	28	38.0	33 14.2	115 45.5	C	3.2	*	KANE SPRING
28	20	30	2.8	33 14.2	115 45.5	C	3.2	*	KANE SPRING
29	7	11	24.2	35 5.8	118 30.2	B	2.8	0.1	CUMMINGS MTN
30	15	8	12.9	33 58.3	117 56.1	B	2.8	2.6	ANAHEIM

NOV, 1963

1	14	6	0.4	35 45.2	120 28.3	C	3.2	17.7	PARKFIELD
2	18	58	13.7	33 14.2	115 36.4	C	3.9	10.4	CALIPATRIA
2	20	6	1.6	35 25.8	119 11.5	C	3.3	1.0	BAKERSFIELD WEST
2	21	41	50.8	33 53.8	117 47.8	B	3.0	4.5	ANAHEIM
4	1	32	37.5	35 45.2	117 43.8	B	3.3	*	MOUNTAIN SPRINGS CANYON
8	16	25	30.0	33 58.7	117 22.3	B	3.3	15.8	RIVERSIDE
8	21	53	45.2	36 14.7	117 51.0	B	2.6	*	HAIWEE RESERVOIR
8	23	29	43.3	35 49.2	117 37.1	B	3.4	-0.7	MOUNTAIN SPRINGS CANYON
11	9	41	34.8	34 22.1	118 39.4	C	2.9	5.1	SANTA SUSANA
18	9	31	38.5	36 13.2	120 18.2	C	3.5	15.0	COALINGA
			(IV) 15 MI. NE OF SAN MIGUEL (ES)						
18	17	38	58.0	34 18.2	118 25.1	B	2.1	*	SAN FERNANDO
18	23	26	27.0	33 27.6	116 38.2	B	3.4	5.0	WARNER SPRINGS
21	1	5	9.4	35 28.1	119 14.4	B	2.8	2.2	BAKERSFIELD WEST
21	1	13	4.2	35 25.7	119 13.9	C	3.8	*	BAKERSFIELD WEST
			(III) BUTTONWILLOW (ES)						
21	2	4	11.2	35 24.0	119 3.1	B	3.1	9.6	BAKERSFIELD WEST
22	9	14	42.6	34 4.6	117 48.8	B	2.7	8.2	POMONA
25	17	21	19.6	34 11.3	118 27.8	C	1.9	0.2	HOLLYWOOD
25	20	58	30.2	33 41.3	118 26.0	B	2.8	6.1	SAN PEDRO
26	12	18	55.6	34 12.6	118 27.0	C	1.6	-1.5	HOLLYWOOD

EARTHQUAKES IN SOUTHERN CALIFORNIA REGION, NOV, 1963

DA	H	M	S	LAT N	LONG W	Q	MAG	DEPTH	QUADRANGLE
28	16	19	32.5	33 49.7	118 9.5	B	3.0	-1.5	DOWNEY

DEC, 1963

3	11	33	40.9	32 35.4	117 18.3	C	3.1	4.2	SAN DIEGO OFFSHORE
6	8	34	21.5	37 38.9	118 23.7	C	4.7	1.7	WHITE MTN SW
			(VI)	BISHOP (ES)					
6	10	9	31.5	37 35.5	118 14.6	C	3.7	-1.2	MOUNT BARCROFT
6	10	36	47.8	37 53.3	118 52.7	D	3.2	-1.1	MT MORRISON NORTH
6	11	19	23.7	37 33.0	118 15.2	C	3.0	2.2	WHITE MTN SW
6	12	21	46.4	37 32.2	118 17.3	C	2.8	7.1	WHITE MTN SW
6	13	54	22.1	36 26.9	117 54.6	C	3.8	*	KEELER
			(IV)	LONE PINE (ES)					
10	16	51	30.4	35 3.4	118 23.7	B	2.8	10.5	TEHACHAPI
10	22	26	11.4	34 9.9	116 44.3	B	3.7	3.4	MORONGO VALLEY
11	12	59	5.7	34 10.7	116 46.1	C	3.1	0.3	SAN GORGONIO MTN
12	17	10	48.5	34 58.6	119 30.7	C	3.1	4.8	CUYAMA VALLEY
14	2	48	13.6	32 45.3	117 8.8	C	3.1	2.6	LA JOLLA
			(IV)	SAN DIEGO (ES)					
16	14	43	55.0	33 6.9	119 23.6	C	2.8	10.9	SAN NICOLAS I SE
18	11	47	8.2	35 29.6	117 49.2	C	2.7	29.5	SALTDALE
19	8	18	42.0	34 27.4	117 29.3	B	2.6	7.3	CAJON PASS
19	21	0	31.3	34 8.1	117 36.4	B	2.9	7.2	ONTARIO
20	10	27	58.2	34 11.0	116 12.5	C	3.5	*	TWENTYNINE PALMS
23	10	23	10.5	34 13.7	117 33.1	B	2.7	*	ONTARIO
23	16	35	40.0	34 19.7	116 51.8	C	2.8	1.1	LUCERNE VALLEY
24	11	14	8.7	34 32.8	116 51.2	B	3.3	-1.7	ORD MTS
27	12	26	2.3	32 59.3	116 42.4	B	3.1	11.8	CUYAMACA PEAK

EARTHQUAKES IN SOUTHERN CALIFORNIA REGION, JAN, 1964

DA	H	M	S	LAT N	LONG W	Q	MAG	DEPTH	QUADRANGLE
2	12	31	29.2	32 53.1	115 35.1	C	2.9	*	BRAWLEY
2	19	48	41.0	35 26.4	118 20.8	B	4.2	6.3	EMERALD MTN
			(IV) CANTIL (ES)						
2	23	36	33.0	35 27.3	118 21.6	B	2.9	1.2	EMERALD MTN
3	2	50	57.8	35 26.7	118 20.1	B	2.8	-0.5	EMERALD MTN
5	6	47	10.8	34 6.1	118 15.3	C	2.2	8.5	HOLLYWOOD
5	12	1	47.5	34 12.1	117 30.5	B	2.5	1.2	ONTARIO
6	23	15	55.5	34 24.3	116 26.6	C	3.8	2.6	EMERSON LAKE
6	23	47	12.8	34 22.8	116 28.5	B	4.5	12.3	EMERSON LAKE
			(V) FOREST FALLS AND YUCCA VALLEY (ES)						
6	23	57	28.8	34 22.1	116 28.8	C	3.2	12.0	EMERSON LAKE
7	0	6	11.0	34 22.6	116 26.6	C	3.2	*	EMERSON LAKE
11	0	0	36.0	32 49.2	117 3.5	B	2.8	8.9	LA JOLLA
16	17	31	6.0	33 2.2	116 10.5	C	3.2	-0.8	BORREGO MTN
17	7	8	28.0	31 6.0	114 12.0		4.5		GOLFO DE CALIFORNIA (M)
			EPICENTER BY USCGS						
19	14	37	31.7	33 45.7	117 54.6	C	2.5	5.5	ANAHEIM
23	4	41	20.4	35 2.5	118 58.5	B	3.1	*	ARVIN
24	0	17	24.7	34 51.3	118 55.8	B	3.1	16.7	FRAZIER MTN
24	9	31	7.3	34 11.4	118 55.2	C	2.7	10.0	TRIUNFO PASS
24	21	23	51.1	33 23.6	118 14.2	C	2.3	*	GULF OF SANTA CATALINA
27	11	56	14.5	37 31.1	118 38.8	C	3.6	7.4	CASA DIABLO MTN
			(IV) LONG VALLEY RESERVOIR, 25 MI. NW OF BISHOP (ES)						
30	11	50	19.4	34 0.7	116 47.9	B	3.4	15.6	SAN GORGONIO MTN
30	11	50	34.8	34 11.0	116 49.3	C	3.5	*	SAN GORGONIO MTN
31	7	47	23.9	33 8.0	116 9.5	C	3.4	3.3	BORREGO MTN
31	11	2	12.4	34 1.2	116 47.5	B	2.7	10.0	SAN GORGONIO MTN

FEB, 1964

1	1	29	58.6	32 48.3	115 48.2	C	3.5	*	PLASTER CITY
1	19	51	43.1	33 11.6	115 46.5	C	3.4	*	KANE SPRING
			(II) SAN DIEGO (ES)						
2	14	38	21.4	33 41.0	117 58.2	B	2.5	2.1	SANTA ANA
3	2	46	6.0	31 6.0	114 48.0		4.5		SAN FELIPE (M)
			EPICENTER BY USCGS						
3	8	43	36.0	31 30.0	114 12.0		5.0		EL GOLFO (M)
			(III) SAN DIEGO (ES)						
			EPICENTER BY USCGS						
3	9	15	42.0	31 18.0	114 12.0		4.5		GOLFO DE CALIFORNIA (M)
			EPICENTER BY USCGS						
3	13	51	7.0	31 18.0	114 12.0		4.5		GOLFO DE CALIFORNIA (M)
			EPICENTER BY USCGS						
3	23	12	27.0	31 0.	114 18.0		4.5		GOLFO DE CALIFORNIA (M)
			EPICENTER BY USCGS						
4	5	40	23.0	31 6.0	114 18.0		4.5		GOLFO DE CALIFORNIA (M)
			EPICENTER BY USCGS						
4	9	31	30.0	31 6.0	114 24.0		4.5		GOLFO DE CALIFORNIA (M)
			EPICENTER BY USCGS						
5	19	46	0.8	35 26.8	118 39.1	B	3.5	1.1	BRECKENRIDGE MTN
5	20	18	9.9	35 26.5	118 39.2	B	3.4	1.7	BRECKENRIDGE MTN
7	22	7	50.3	35 27.3	118 36.3	B	4.4	*	BRECKENRIDGE MTN
			(IV) BODFISH AND CALIENTE (ES)						
7	22	10	52.0	35 27.9	118 40.1	B	4.2	-0.5	BRECKENRIDGE MTN

EARTHQUAKES IN SOUTHERN CALIFORNIA REGION, FEB, 1964

DA	H	M	S	LAT N	LONG W	Q	MAG	DEPTH	QUADRANGLE
8	3	37	25.7	32 53.1	115 42.1	C	3.3	*	BRAWLEY
8	5	29	22.8	34 14.2	118 35.6	B	3.6	11.8	CALABASAS
			FELT, SAN FERNANDO VALLEY, WEST HOLLYWOOD, BEVERLY HILLS, BROKE GLASS IN NORTHRIDGE (PR)						
8	10	24	28.5	35 27.6	118 39.9	B	2.8	5.3	BRECKENRIDGE MTN
8	17	11	56.4	34 14.9	118 35.3	B	2.0	10.7	CALABASAS
8	22	8	35.2	35 27.6	118 39.0	B	3.1	-0.7	BRECKENRIDGE MTN
9	19	4	30.4	34 9.2	117 42.3	B	3.3	6.9	ONTARIO
10	5	47	28.7	35 59.0	120 49.2	C	3.8	5.0	BRADLEY
11	12	30	1.1	34 22.3	118 25.3	C	2.3	*	SAN FERNANDO
14	10	43	17.7	35 26.9	118 35.6	B	2.6	1.0	BRECKENRIDGE MTN
14	18	52	20.2	35 27.4	118 40.0	B	3.0	2.0	BRECKENRIDGE MTN
15	2	7	12.0	36 10.0	118 0.	D	2.5		MONACHE MTN
15	15	47	8.9	36 45.4	118 14.0	B	3.5	1.2	INDEPENDENCE
17	18	57	19.6	33 26.4	116 41.0	B	3.4	5.9	WARNER SPRINGS
20	22	20	53.3	33 48.1	118 8.0	B	3.2	9.4	DOWNEY
			(V) LONG BEACH (ES)						
21	3	1	38.0	31 24.0	114 6.0		4.5		GOLFO DE CALIFORNIA (M)
			EPICENTER BY USCGS						
22	9	54	20.1	33 54.7	117 59.2	B	2.8	5.8	ANAHEIM
			FELT, WHITTIER (PH)						
24	8	54	23.0	34 26.1	118 33.3	B	2.7	9.1	SANTA SUSANA
24	10	53	52.7	35 45.4	116 37.2	C	3.5	10.4	CONFIDENCE HILLS
27	7	16	46.4	33 52.0	118 37.6	C	2.4	*	SANTA MONICA BAY
28	4	13	27.3	34 10.2	117 20.5	B	2.5	10.4	SAN BERNARDINO
28	9	9	35.7	33 23.0	116 22.0	C	3.2	3.1	CLARK LAKE
29	1	34	4.5	34 23.7	116 32.3	B	3.0	*	OLD WOMAN SPRINGS
29	19	11	17.9	33 38.6	117 59.0	B	2.8	7.1	SANTA ANA

MAR, 1964

1	8	54	17.2	33 50.6	118 14.1	C	2.5	*	DOWNEY
1	8	56	1.0	34 0.	118 0.	D	2.0		PASADENA
5	17	6	9.0	33 44.4	117 51.7	C	2.1	*	SANTA ANA
9	2	6	31.0	37 36.0	118 24.0		4.0		WHITE MTN SW
			(IV) BISHOP (ES)						
			EPICENTER BY USCGS						
9	20	49	56.9	35 26.0	118 41.1	B	3.6	5.6	BRECKENRIDGE MTN
			(III) MIRACLE HOT SPRINGS (ES)						
12	4	41	8.7	37 20.1	118 40.3	B	3.5	*	MT TOM
14	17	42	23.5	37 37.9	118 22.9	C	3.7	13.4	WHITE MTN SW
15	5	48	35.2	33 29.1	116 30.8	B	3.3	1.7	WARNER SPRINGS
15	19	44	25.2	33 9.0	115 56.4	C	3.2	0.7	KANE SPRING
15	20	29	39.5	33 2.1	115 15.0	C	3.5	2.5	IRIS
16	16	38	42.9	34 3.9	117 29.1	B	3.1	5.8	SAN BERNARDINO
			FELT, FONTANA (PR)						
18	5	46	10.9	33 53.9	118 24.4	B	2.7	7.6	TORRANCE
			FELT, INGLEWOOD (PH)						
21	0	27	3.4	33 56.2	118 24.4	B	3.0	9.3	TORRANCE
25	4	45	15.2	33 14.2	118 44.8	C	2.6	19.5	SAN CLEMENTE I NW
26	1	33	25.4	33 33.1	118 51.7	D	2.6	10.0	SANTA BARBARA I NE
26	3	6	58.1	33 15.6	116 28.3	C	3.1	*	CLARK LAKE

EARTHQUAKES IN SOUTHERN CALIFORNIA REGION, APR, 1964

DA	H	M	S	LAT N	LONG W	Q	MAG	DEPTH	QUADRANGLE
10	3	9	39.4	34 15.4	117 5.9	B	2.5	2.1	LAKE ARROWHEAD
12	10	10	8.4	34 3.0	117 30.0	B	2.4	5.9	SAN BERNARDINO
			(IV) AT ETIWANDA (ES)						
15	7	0	6.9	33 31.4	118 13.3	B	3.1	-0.8	LAS BOLSAS
15	20	16	57.9	33 25.1	116 36.9	B	3.2	10.9	WARNER SPRINGS
16	4	56	37.9	34 56.0	116 31.7	B	3.1	-1.6	NEWBERRY
23	1	30	1.5	33 56.3	118 25.6	B	2.9	12.3	TORRANCE
			FELT, WEST LOS ANGELES (PR)						
24	11	24	6.9	32 56.9	115 53.4	C	3.3	-1.1	PLASTER CITY
26	5	28	36.0	35 33.5	117 20.5	B	3.2	*	SEARLES LAKE
26	20	5	9.5	33 33.2	118 12.3	B	2.7	9.6	LAS BOLSAS
29	23	27	44.5	33 3.4	116 25.7	C	3.2	*	BORREGO

MAY, 1964

6	16	54	4.9	35 25.7	118 38.9	B	3.9	3.4	BRECKENRIDGE MTN
			(IV) AT CALIENTE (ES)						
7	2	22	56.0	37 30.0	118 30.0	D	3.5		CASA DIABLO MTN
8	18	51	6.1	35 25.5	118 42.4	B	2.9	16.4	BRECKENRIDGE MTN
9	7	22	23.7	34 29.6	116 22.2	B	3.5	*	EMERSON LAKE
11	16	34	8.0	32 0.	115 20.0	D	4.0		SIERRA CUCAPA (M)
14	11	23	48.2	34 30.4	116 16.9	B	3.0	*	LAVIC
15	19	56	25.0	31 36.0	114 6.0		4.4		EL GOLFO (M)
			EPICENTER BY USCGS						
22	2	38	24.3	33 28.3	116 34.8	C	3.8	5.5	WARNER SPRINGS
22	5	6	41.8	34 3.3	117 11.5	B	3.1	13.4	REDLANDS
			FELT, SAN BERNARDINO AREA (PR)						
24	16	26	42.4	35 7.1	118 32.1	C	3.6	4.4	CUMMINGS MTN
			(V) TEHACHAPI (ES)						
26	19	38	33.4	33 57.8	118 24.0	B	2.6	4.7	TORRANCE
31	6	38	57.2	35 31.0	118 51.2	B	3.7	6.1	WOODY
			FELT, KERN COUNTY POWER HOUSE AND MIRACLE HOT SPRINGS (ES)						

JUN, 1964

4	10	3	41.3	31 53.9	116 17.4	C	4.1	-0.5	SANTO TOMAS (M)
6	11	47	39.0	34 24.0	121 38.0	D	4.3	50.0	OFF CONTINENTAL SHELF
6	17	15	54.0	31 18.0	116 12.0		4.6		SAN VICENTE (M)
			EPICENTER BY USCGS						
6	17	39	18.8	33 59.1	116 42.6	B	3.2	15.1	PALM SPRINGS
7	3	24	50.4	34 14.8	116 17.1	B	3.0	2.6	JOSHUA TREE
9	4	9	57.1	33 42.8	116 44.4	C	3.0	4.2	IDYLLWILD
13	22	58	26.7	33 47.9	117 57.4	B	3.0	7.9	ANAHEIM
			(III) AT WHITTIER (ES)						
13	23	5	27.2	33 48.2	117 59.2	B	2.6	9.8	ANAHEIM
14	21	47	4.6	35 24.5	118 37.7	B	3.1	-0.8,	BRECKENRIDGE MTN
17	13	36	48.4	35 35.2	118 23.8	B	2.5	-0.5	ISABELLA
20	9	21	51.4	34 40.4	120 8.1	C	3.1	22.8	LOS OLIVOS
21	15	32	51.8	32 41.5	117 9.7	B	3.7	2.7	SAN DIEGO
			(VI) CORONADO AND SAN DIEGO (ES)						
21	21	47	42.2	34 7.2	117 29.3	B	3.0	7.4	SAN BERNARDINO
			FELT, FONTANA (PR)						
21	22	15	23.1	35 17.8	118 37.7	B	2.9	*	BRECKENRIDGE MTN
23	4	54	37.5	32 41.4	117 7.4	B	3.6	7.6	SAN DIEGO
			(VI) AT IMPERIAL BEACH (ES)						

EARTHQUAKES IN SOUTHERN CALIFORNIA REGION, JUN, 1964

DA	H	M	S	LAT N	LONG W	Q	MAG	DEPTH	QUADRANGLE
23	19	4	9.6	35 1.7	118 35.3	B	2.9	6.3	CUMMINGS MTN
24	9	28	14.6	33 37.1	118 17.3	B	3.0	3.3	SAN PEDRO
24	20	11	35.7	35 3.7	118 24.1	B	2.6	12.5	TEHACHAPI

JUL, 1964

7	6	39	21.6	36 5.1	117 36.0	C	3.3	*	COSO PEAK
8	4	51	13.4	33 58.8	117 36.8	B	2.5	10.9	CORONA
9	7	37	23.3	34 18.5	118 30.3	B	2.9	11.7	SANTA SUSANA
9	7	42	57.7	34 20.5	118 29.1	C	1.9	5.4	SAN FERNANDO
12	22	39	27.4	34 42.0	119 14.0	C	2.8	14.9	TOPATOPA MTS
13	19	1	26.5	33 53.5	117 19.9	B	2.9	12.8	RIVERSIDE
15	3	11	5.8	32 42.3	117 6.8	B	3.5	5.8	SAN DIEGO
			(V) AT CHULA VISTA AND SAN DIEGO (ES)						
15	18	43	14.5	35 42.2	118 5.1	B	3.0	-1.0	ONYX
19	6	26	59.5	32 25.6	117 49.7	C	3.4	5.4	CONTINENTAL SHELF (M)
19	8	2	56.0	31 49.0	116 30.0	D	3.5	-1.7	ENSENADA (M)
22	9	53	40.0	31 56.7	115 49.0	D	3.9	20.7	SIERRA JUAREZ SE (M)
22	10	34	12.0	31 42.0	114 6.0		5.0		EL GOLFO (M)
			EPICENTER BY USCGS						
22	23	40	28.9	34 9.7	116 11.2	C	3.3	9.3	TWENTYNINE PALMS

AUG, 1964

1	18	29	41.2	33 52.0	118 48.2	B	3.5	18.9	OFF POINT DUME
3	1	1	56.8	34 56.7	118 54.0	B	3.3	6.3	FRAZIER MTN
3	11	24	39.0	34 13.7	116 44.5	C	2.8	*	MORONGO VALLEY
4	3	33	14.5	33 36.8	118 0.1	B	2.7	3.7	LAS BOLSAS
4	20	45	44.6	33 29.5	116 51.1	B	3.9	19.5	PALOMAR MTN
			FELT, HEMET (PR)						
17	22	33	46.2	33 5.7	115 53.9	C	3.9	21.0	KANE SPRING
			FELT, OAK GROVE RANGER STATION (NEAR PALA)						
18	17	21	39.5	35 33.8	118 23.8	B	2.8	*	ISABELLA
21	6	33	54.0	33 33.2	118 0.6	C	2.8	0.1	LAS BOLSAS
			FELT, LONG BEACH, HUNTINGTON BEACH, WESTMINSTER (PR)						
21	7	40	57.6	34 20.7	117 38.9	B	2.4	6.8	SAN ANTONIO
22	5	26	5.0	31 24.0	114 24.0		4.5	33.0	GOLFO DE CALIFORNIA (M)
			EPICENTER BY USCGS						
23	14	16	2.0	35 10.0	118 20.0		3.0		TEHACHAPI
23	15	48	1.9	35 14.8	118 33.8	B	3.2	-1.0	CUMMINGS MTN
23	17	25	11.3	35 19.2	118 34.2	C	2.7	2.3	BRECKENRIDGE MTN
30	22	57	37.1	34 16.1	118 26.7	B	4.0	15.4	SAN FERNANDO
			(V) AT BURBANK, HOLLYWOOD, TOPANGA (ES)						
31	16	16	49.3	33 58.8	116 37.2	B	3.1	12.2	PALM SPRINGS
31	17	3	39.3	35 27.4	118 19.5	B	3.9	6.6	EMERALD MTN

SEP, 1964

1	10	26	24.3	35 24.9	118 23.5	B	2.9	*	EMERALD MTN
4	7	12	53.5	33 58.4	116 49.9	B	3.1	*	BANNING
4	20	20	22.7	37 44.3	118 25.8	C	4.0	18.0	WHITE MTN SW
			(V) AT BISHOP (ES)						
6	18	51	0.3	33 10.8	115 49.7	C	3.3	*	KANE SPRING
10	0	26	59.8	33 55.9	118 27.2	B	2.8	13.1	TORRANCE
			(IV) AT MANHATTAN BEACH (ES)						

EARTHQUAKES IN SOUTHERN CALIFORNIA REGION, SEP, 1964

DA	H	M	S	LAT N	LONG W	Q	MAG	DEPTH	QUADRANGLE
10	5	47	46.0	32 20.0	116 0.	D	3.5		SIERRA JUAREZ NW (M)
10	14	57	6.1	34 22.7	116 15.9	C	2.9	*	EMERSON LAKE
14	2	18	13.7	35 26.8	118 20.9	B	3.0	1.7	EMERALD MTN
16	12	22	49.3	35 2.8	118 57.3	B	3.3	11.9	ARVIN
16	14	40	38.0	31 24.0	114 0.		3.5		GOLFO DE CALIFORNIA (M)
			EPICENTER BY USCGS						
19	23	13	17.9	33 18.3	118 17.5	B	2.8	0.6	SANTA CATALINA EAST
24	1	47	30.2	31 33.1	115 41.9	C	4.1	*	SIERRA JUAREZ SE (M)
30	17	51	25.8	35 25.9	118 39.8	B	4.0	7.4	BRECKENRIDGE MTN
			(II) AT GREENFIELD (10 MI. SOUTH OF BAKERSFIELD) (ES)						

OCT, 1964

1	12	5	39.0	31 12.0	114 12.0		4.5		GOLFO DE CALIFORNIA (M)
			EPICENTER BY USCGS						
5	1	21	9.5	33 2.2	115 54.2	B	4.1	*	KANE SPRING
5	1	24	55.5	33 3.2	115 51.3	B	4.4		KANE SPRING
5	1	47	17.3	33 0.9	115 58.6	C	3.3	*	KANE SPRING
5	1	52	12.2	33 5.2	115 55.1	C	3.8	*	KANE SPRING
8	2	45	45.9	33 34.9	118 19.6	B	2.6	0.5	SAN PEDRO
12	2	35	44.4	34 54.7	116 44.2	B	3.0	0.2	NEWBERRY
16	10	52	49.3	34 12.9	116 13.8	C	3.0	*	TWENTYNINE PALMS
19	10	58	11.1	35 20.0	118 32.5	B	2.7	*	BRECKENRIDGE MTN
20	5	57	9.8	35 3.0	118 58.0	B	3.1	*	ARVIN
23	21	0	30.3	35 21.9	118 34.2	B	3.0	*	BRECKENRIDGE MTN
24	9	19	43.6	33 35.7	118 18.8	B	2.8	10.0	SAN PEDRO
29	21	18	6.6	34 20.8	116 35.7	B	3.2	2.1	OLD WOMAN SPRINGS
30	17	50	47.0	37 42.0	118 12.0		3.5		MOUNT BARCROFT
			EPICENTER BY USCGS						
30	18	18	7.0	37 42.0	118 30.0		3.0		CASA DIABLO MTN
			EPICENTER BY USCGS						
30	19	1	46.0	37 48.0	118 12.0		3.5		WHITE MTN NE (N)
			EPICENTER BY USCGS						
30	19	3	12.0	37 42.0	118 0.		4.0		MOUNT BARCROFT
			EPICENTER BY USCGS						
			FELT, DYER ,NEVADA (ES)						
30	23	2	59.0	37 42.0	118 0.		3.5		MOUNT BARCROFT
			EPICENTER BY USCGS						

NOV, 1964

2	11	38	56.0	37 36.0	118 0.		4.5		MOUNT BARCROFT
			EPICENTER BY USCGS						
			FELT, DYER, NEV. AND OASIS, CAL. (ES)						
3	9	10	29.5	35 36.8	118 22.9	B	2.9	2.1	ISABELLA
3	18	58	44.0	37 36.0	118 0.		3.5		MOUNT BARCROFT
			EPICENTER BY USCGS						
4	11	50	34.0	37 36.0	118 12.0		3.5		MOUNT BARCROFT
			EPICENTER BY USCGS						
4	11	53	56.0	37 30.0	118 24.0		3.0		WHITE MTN SW
			EPICENTER BY USCGS						
5	2	14	1.9	34 13.4	116 42.6	B	2.8	12.7	MORONGO VALLEY
8	1	19	18.0	35 57.5	120 2.0	C	4.0	5.0	KETTLEMAN PLAIN
10	7	29	8.4	34 37.3	116 50.6	B	2.8	*	ORD MTS

EARTHQUAKES IN SOUTHERN CALIFORNIA REGION, NOV, 1964

DA	H	M	S	LAT N	LONG W	Q	MAG	DEPTH	QUADRANGLE
12	20	7	25.0	37 42.0	118 0.		4.0		MOUNT BARCROFT
			EPICENTER BY USCGS						
13	5	5	11.0	37 36.0	118 0.		4.0		MOUNT BARCROFT
			EPICENTER BY USCGS						
17	14	52	28.2	33 53.9	116 34.1	B	4.0	10.3	PALM SPRINGS
			FELT, PALM SPRINGS, PALM DESERT, DESERT HOT SPRINGS (PR)						
21	7	3	7.0	32 48.6	116 0.3	C	3.2	*	CARRIZO MTN
21	9	5	21.9	32 54.7	115 47.0	C	2.8	1.9	PLASTER CITY
21	16	47	41.0	34 22.0	118 56.0	D	3.0	*	PIRU
21	17	25	59.7	33 0.1	116 5.1	B	4.2	4.1	BORREGO MTN
21	17	35	22.8	33 1.3	116 5.2	B	3.4	*	BORREGO MTN
23	23	52	30.0	37 30.0	117 54.0		4.0		SILVER PEAK SW (N)
			EPICENTER BY USCGS						
26	8	3	12.0	35 2.8	119 5.1	B	3.1	14.3	CONNER
26	8	4	16.3	34 58.4	119 4.4	C	2.6	6.6	CUDDY VALLEY
26	19	48	41.0	33 0.	115 41.0	D	3.3	*	CALIPATRIA
26	19	54	26.0	32 58.0	115 40.0	D	3.3	*	BRAWLEY
27	12	18	6.0	33 4.0	115 46.0	D	3.1	*	KANE SPRING
28	10	8	22.9	32 12.4	116 4.1	C	3.3	*	SIERRA JUAREZ NW (M)
29	12	44	2.5	33 1.7	115 46.7	C	3.2	*	KANE SPRING
29	12	45	17.0	33 0.5	115 40.9	C	3.5	*	CALIPATRIA
29	14	25	26.4	32 59.4	115 40.9	B	4.2	13.8	BRAWLEY

DEC, 1964

2	9	17	51.0	37 30.0	117 54.0		3.5		SILVER PEAK SW (N)
			EPICENTER BY USCGS						
4	2	40	35.3	35 35.9	118 23.3	B	3.3	-1.5	ISABELLA
4	11	39	58.6	35 34.8	118 24.4	B	3.1	*	ISABELLA
4	14	55	6.6	33 59.2	117 34.6	B	2.4	6.6	CORONA
6	2	23	1.3	33 28.9	116 39.0	B	3.1	16.5	WARNER SPRINGS
6	13	9	56.1	33 42.7	116 49.0	B	3.1	15.4	HEMET
11	3	35	38.8	34 14.8	119 45.4	B	3.5	1.4	SANTA CRUZ I NW
11	23	34	58.1	34 16.6	117 34.9	B	3.0	9.3	SAN ANTONIO
21	0	33	33.1	35 38.1	118 24.0	B	3.0	9.7	ISABELLA
22	3	46	18.8	34 14.5	118 51.2	B	2.9	0.8	TRIUNFO PASS
22	20	54	33.2	31 48.6	117 7.8	C	5.6	2.3	CONTINENTAL SHELF (M)
			(VI) IN SAN DIEGO AREA (ES)						
			FELT IN UPPER FLOORS OF TALL BUILDINGS IN LOS ANGELES (PR)						
22	21	1	4.4	32 32.7	115 39.3	D	3.5	*	HEBER
23	19	51	21.2	34 48.0	118 57.8	B	3.5	4.7	FRAZIER MTN
			(IV) AT FORT TEJON, FRAZIER PARK, AND LEBEC (ES)						
28	10	58	24.5	35 17.7	118 37.8	C	3.1	*	BRECKENRIDGE MTN
28	11	34	36.6	35 18.9	118 34.7	C	2.8	9.1	BRECKENRIDGE MTN
31	10	41	4.3	35 3.5	116 35.2	B	3.8	8.4	ALVORD MTN

EARTHQUAKES IN SOUTHERN CALIFORNIA REGION, JAN, 1965

DA	H	M	S	LAT N	LONG W	Q	MAG	DEPTH	QUADRANGLE
1	6	39	53.9	34 8.3	117 29.0	B	1.8	8.5	SAN BERNARDINO
1	7	41	32.9	34 7.4	117 31.4	B	3.9	7.5	ONTARIO
			(V) AT ETIWANDA						
1	8	4	18.0	34 8.4	117 30.9	B	4.4	5.9	ONTARIO
			(VI) AT FONTANA (ES)						
1	13	29	15.9	34 7.3	117 29.1	B	2.3	7.5	SAN BERNARDINO
3	21	43	48.7	33 52.6	117 42.5	B	2.6	7.7	CORONA
9	20	37	12.0	31 36.0	115 0.		4.0		SIERRA TINAJA (M)
			EPICENTER BY USCGS						
10	9	26	22.3	34 8.5	117 32.2	B	2.3	5.8	ONTARIO
12	8	53	33.8	35 12.4	117 6.3	B	2.7	3.0	OPAL MTN
14	0	34	36.0	34 52.6	119 1.0	B	3.3	9.6	CUDDY VALLEY
14	7	28	7.2	34 7.4	116 31.0	B	3.3	10.8	MORONGO VALLEY
16	12	53	37.7	33 52.5	118 13.9	C	2.5	18.0	DOWNEY
18	6	57	19.5	31 47.2	116 18.0	C	4.0	6.3	SANTO TOMAS (M)
19	22	8	11.0	31 41.7	116 35.9	C	3.6	*	ENSENADA (M)
20	16	12	28.2	34 14.2	116 27.3	B	2.7	2.4	JOSHUA TREE
21	21	9	50.5	34 2.9	117 10.5	B	3.0	9.4	REDLANDS
			(IV) AT PINON HILLS (25 MI.NORTHEAST OF SAN BERNARDINO) (ES)						
26	0	9	17.8	33 56.6	117 54.7	C	2.7		ANAHEIM
26	2	55	49.2	34 13.8	117 47.5	B	2.8	4.7	POMONA
			FELT, GLENDORA (PH)						
26	8	36	36.6	35 55.0	120 16.4	C	3.1	2.7	PARKFIELD
26	8	38	16.4	36 2.7	120 15.7	C	3.1	*	COALINGA
28	14	51	11.2	31 33.2	115 47.8	C	4.2	*	SIERRA JUAREZ SE (M)

FEB, 1965

3	22	32	25.7	35 50.5	117 18.4	B	2.6	*	TRONA
3	23	33	13.5	34 19.0	116 51.8	B	2.4	*	LUCERNE VALLEY
4	4	39	45.1	35 36.8	118 19.8	B	3.1	2.4	ISABELLA
4	7	24	8.6	36 11.5	117 37.4	B	2.5	5.6	COSO PEAK
8	20	23	49.9	36 9.4	118 3.1	B	3.1	-0.9	MONACHE MTN
11	11	13	44.2	34 34.9	118 8.4	B	3.1	*	LANCASTER
11	19	9	56.2	35 23.1	118 31.6	B	3.0	2.1	BRECKENRIDGE MTN
12	5	1	9.3	32 41.7	119 5.8	C	2.6	0.2	CONTINENTAL SHELF
12	5	1	38.7	32 33.8	119 16.8	C	2.9	36.1	CONTINENTAL SHELF
12	5	6	18.2	33 3.1	118 51.7	D	2.8	*	CONTINENTAL SHELF
12	10	16	9.6	32 45.0	119 3.1	C	3.4	12.9	CONTINENTAL SHELF
12	11	20	15.6	32 41.5	119 7.5	C	2.7	6.3	CONTINENTAL SHELF
12	22	4	58.9	32 37.3	119 13.0	C	2.8	12.5	CONTINENTAL SHELF
14	20	5	47.6	34 9.2	116 52.9	B	3.5	-1.8	SAN GORGONIO MTN
19	17	46	28.1	34 10.5	117 28.2	B	3.5	2.9	SAN BERNARDINO
			(V) AT CUCAMONGA, MUSCOY, PATTON, AND SAN BERNARDINO (ES)						
25	7	45	34.5	32 55.8	115 43.8	C	3.8	3.0	BRAWLEY
			(V) AT EL CENTRO (ES)						
25	11	21	56.5	34 9.7	117 25.6	B	3.7	4.0	SAN BERNARDINO
			(V) AT ETIWANDA AND SAN BERNARDINO (ES)						
27	2	28	8.9	34 6.8	117 18.6	B	3.3	12.5	SAN BERNARDINO
			(IV) AT SAN BERNARDINO (ES)						

MAR, 1965

1	10	1	37.6	32 54.4	115 41.9	C	3.2	4.7	BRAWLEY
			FELT, BRAWLEY (PR)						

EARTHQUAKES IN SOUTHERN CALIFORNIA REGION, MAR, 1965

DA	H	M	S	LAT N	LONG W	Q	MAG	DEPTH	QUADRANGLE
4	6	28	12.7	33 35.9	117 51.8	B	2.7	2.5	SANTA ANA
4	6	44	55.3	33 45.0	117 47.9	C	2.3	35.8	ANAHEIM
5	10	51	26.4	34 9.7	117 25.3	B	2.3	1.0	SAN BERNARDINO
6	4	1	0.5	33 7.2	115 40.2	C	2.9	*	CALIPATRIA
6	6	13	29.9	33 41.7	119 21.3	B	2.8	2.1	CONTINENTAL SHELF
6	21	23	17.3	31 40.9	116 31.5	C	3.5	0.3	ENSENADA (M)
8	12	55	9.6	35 35.8	118 23.6	B	2.8	2.2	ISABELLA
10	18	2	42.9	35 37.3	118 23.3	B	2.7	0.8	ISABELLA
12	7	10	27.8	34 6.7	117 24.6	C	2.3	5.0	SAN BERNARDINO
14	10	43	0.1	34 4.2	117 27.0	B	2.5	8.6	SAN BERNARDINO
14	13	52	42.6	35 17.6	118 35.4	B	2.7	2.7	BRECKENRIDGE MTN
17	13	7	59.1	34 0.3	117 3.9	B	2.9	7.1	REDLANDS
			FELT, RIVERSIDE AREA (PR)						
19	3	9	25.5	34 5.0	117 20.9	B	2.5	17.0	SAN BERNARDINO
27	4	57	13.0	33 59.6	116 49.1	B	2.6	16.3	BANNING
28	2	32	21.0	36 12.0	120 24.0		3.5		COALINGA
			EPICENTER BY USCGS						
31	13	21	44.0	34 2.7	117 54.4	B	2.3	3.1	POMONA

APR, 1965

1	18	13	26.2	35 10.7	118 52.0	B	2.7	0.8	ARVIN
5	11	9	36.5	34 4.7	117 21.3	B	2.3	16.7	SAN BERNARDINO
6	0	23	55.3	34 15.6	119 11.3	B	2.7	2.3	SANTA PAULA
6	23	9	52.6	34 6.0	118 54.8	B	2.5	10.4	TRIUNFO PASS
11	0	46	46.1	33 0.7	115 35.5	C	4.1	*	CALIPATRIA
11	1	32	53.4	32 50.9	115 46.0	C	3.5	*	PLASTER CITY
11	23	59	24.5	32 51.7	115 53.3	C	3.4	*	PLASTER CITY
12	4	8	46.1	34 8.9	117 5.0	C	2.5	10.5	REDLANDS
12	8	41	49.5	37 4.1	117 53.9	C	3.0	12.7	WAUCOBA SPRING
14	14	12	4.3	34 4.7	117 31.6	B	2.6	0.3	ONTARIO
15	18	31	28.6	34 0.8	117 26.2	C	2.4	15.1	SAN BERNARDINO
15	20	8	33.3	34 7.9	117 25.6	B	4.5	5.5	SAN BERNARDINO
			(VI) AT FONTANA, ONTARIO, RIALTO, AND SAN BERNARDINO (ES)						
15	20	12	34.0	34 5.9	117 24.3	B	2.7	-0.6	SAN BERNARDINO
15	20	24	58.8	34 3.1	117 27.6	B	2.7	4.8	SAN BERNARDINO
17	13	31	33.4	35 18.8	118 32.7	C	3.3	15.9	BRECKENRIDGE MTN
23	6	41	39.6	35 34.5	118 30.4	B	3.0	*	GLENNVILLE
24	7	29	47.1	34 54.3	120 8.5	C	3.6	15.1	TEPUSQUET PEAK
25	9	15	17.7	32 53.4	115 36.9	D	3.3	*	BRAWLEY
27	9	21	20.7	33 1.9	115 58.0	C	3.9	1.5	KANE SPRING
28	3	27	43.8	34 8.9	117 24.5	B	2.3	0.3	SAN BERNARDINO
29	13	42	20.8	33 28.8	116 36.6	B	2.6	3.7	WARNER SPRINGS

MAY, 1965

2	4	34	43.9	33 59.4	118 34.5	B	2.7	10.4	SANTA MONICA BAY
13	20	38	0.	31 6.0	116 0.		4.2		SAN VICENTE (M)
			EPICENTER BY USCGS						
23	17	38	5.5	34 9.0	117 25.4	B	2.5	3.0	SAN BERNARDINO
30	0	19	15.4	33 45.3	117 33.1	B	2.8	-1.9	CORONA
30	2	57	34.3	34 31.4	118 53.4	B	3.1	15.3	COBBLESTONE MTN

EARTHQUAKES IN SOUTHERN CALIFORNIA REGION, JUN, 1965

DA	H	M	S	LAT N	LONG W	Q	MAG	DEPTH	QUADRANGLE
1	9	35	11.5	34 9.8	116 53.0	B	2.6	0.9	SAN GORGONIO MTN
1	14	58	10.0	33 5.0	115 57.0	D	3.0	*	KANE SPRING
3	10	7	25.2	34 8.1	117 28.6	B	2.0	7.3	SAN BERNARDINO
6	5	22	42.4	34 4.7	116 30.2	B	3.0	12.1	MORONGO VALLEY
6	16	8	23.9	33 42.6	116 46.2	B	2.8	10.8	HEMET
6	19	36	52.7	35 0.2	118 38.3	C	2.5	30.5	CUMMINGS MTN
7	6	21	39.4	32 43.9	115 29.7	C	3.4	18.8	CALEXICO
16	0	55	10.8	33 3.4	115 35.1	C	3.7	*	CALIPATRIA
			FELT, BRAWLEY (PR)						
16	2	42	6.1	33 3.3	115 37.2	C	4.4	-0.5	CALIPATRIA
			(VI) AT BRAWLEY, IMPERIAL AND WESTMORLAND (ES)						
16	3	47	11.2	33 3.5	115 35.7	C	3.6	3.8	CALIPATRIA
			FELT, BRAWLEY						
16	9	35	18.4	33 4.7	115 38.1	C	3.7	*	CALIPATRIA
16	14	4	28.1	32 55.8	115 44.2	C	3.4	5.0	BRAWLEY
16	15	56	6.3	33 2.6	115 36.5	C	3.2	*	CALIPATRIA
			FELT, BRAWLEY						
16	17	39	36.7	33 4.5	115 39.0	C	3.0	-0.9	CALIPATRIA
16	17	40	36.7	33 6.6	115 41.5	D	3.4	50.0	CALIPATRIA
			FELT, BRAWLEY						
17	4	32	25.3	33 2.7	115 36.7	C	3.7	*	CALIPATRIA
17	7	13	28.8	33 0.8	115 39.5	C	3.3	23.8	CALIPATRIA
17	7	21	40.2	32 54.7	115 39.5	C	3.4	13.1	BRAWLEY
17	7	30	20.9	33 2.2	115 35.1	C	4.3	-1.3	CALIPATRIA
			(III) AT EL CENTRO (ES)						
17	7	40	13.5	33 0.5	115 39.6	C	4.1	8.8	CALIPATRIA
			FELT, BRAWLEY, CALIPATRIA, WESTMORLAND (ES)						
17	7	43	5.0	33 1.2	115 34.4	C	4.2	*	CALIPATRIA
17	8	12	37.1	33 3.2	115 37.7	C	3.1	*	CALIPATRIA
17	8	39	43.0	33 4.7	115 57.4	D	2.9	50.0	KANE SPRING
17	9	54	1.7	33 7.8	115 47.3	C	2.9	*	KANE SPRING
			FELT, BRAWLEY, CALIPATRIA, WESTMORLAND (ES)						
17	16	45	4.6	33 10.6	115 31.5	C	2.8	11.3	CALIPATRIA
18	13	55	52.9	33 58.9	116 27.9	B	3.2	4.3	THOUSAND PALMS
18	22	59	23.8	32 47.8	117 8.2	B	2.8	-0.7	LA JOLLA
23	16	17	18.3	34 58.8	119 3.4	C	3.8	12.6	CUDDY VALLEY
23	16	21	37.5	35 3.5	118 56.9	C	2.7	*	ARVIN
23	16	50	7.5	34 0.6	116 46.5	C	3.0	*	SAN GORGONIO MTN
25	6	12	35.5	34 4.8	119 0.8	C	2.6	1.3	HUENEME
25	13	21	20.8	35 23.9	118 14.5	C	3.0	2.1	CROSS MTN
27	15	51	33.9	33 23.1	118 7.1	C	2.7	-0.1	GULF OF SANTA CATALINA
29	2	25	56.8	35 2.3	119 0.2	B	3.0	1.9	CONNER
29	6	57	49.7	35 2.3	118 38.7	B	2.3	5.2	CUMMINGS MTN
29	8	56	13.2	35 5.5	119 1.3	B	2.8	*	CONNER
29	9	50	33.1	33 4.0	116 35.4	C	2.7	5.4	SANTA YSABEL

JUL, 1965

2	18	56	14.5	33 47.3	118 26.3	C	2.5	7.2	TORRANCE
			FELT, WESTWOOD (PH)						
6	9	10	9.2	33 27.5	116 28.3	B	3.6	7.4	CLARK LAKE
14	12	38	37.9	33 43.0	119 15.9	C	2.8	*	CONTINENTAL SHELF
16	1	18	25.0	34 9.1	117 25.2	B	3.0	3.0	SAN BERNARDINO
			(IV) IN SAN BERNARDINO (ES)						

EARTHQUAKES IN SOUTHERN CALIFORNIA REGION, JUL, 1965

DA	H	M	S	LAT N	LONG W	Q	MAG	DEPTH	QUADRANGLE
16	7	46	22.4	34 29.1	118 31.2	B	4.0	15.1	SANTA SUSANA
			(VI) IN SAUGUS (ES)						
16	18	43	4.7	34 8.5	117 23.6	C	2.5	3.8	SAN BERNARDINO
16	22	8	46.1	33 14.9	116 22.3	C	3.1	15.9	BORREGO
18	15	58	10.6	33 43.3	116 5.2	B	3.5	1.9	COACHELLA
18	16	23	45.3	33 44.4	116 6.5	B	3.1	*	COACHELLA
19	10	9	37.3	33 37.7	118 33.9	B	3.0	14.6	SAN PEDRO CHANNEL
22	13	18	9.4	33 34.6	118 21.0	C	2.5	-1.5	SAN PEDRO
26	20	37	39.9	35 0.1	118 49.2	B	2.8	6.1	ARVIN
27	5	1	58.5	35 0.6	119 8.6	C	2.7	*	CONNER
27	13	8	46.1	33 17.9	116 2.9	C	3.4	*	RABBIT PEAK
27	13	18	4.4	33 9.7	115 58.2	C	3.1	-1.7	KANE SPRING
27	13	31	14.6	33 11.9	116 0.6	B	3.4	3.3	BORREGO MTN
27	14	4	41.4	33 17.3	116 1.1	C	4.3	0.6	RABBIT PEAK
27	15	17	52.4	33 15.7	116 5.0	C	3.7	*	RABBIT PEAK
29	21	50	13.0	33 8.0	119 8.0	D	2.8	9.1	CONTINENTAL SHELF
30	3	1	38.8	34 5.3	119 9.4	C	3.4	13.1	HUENEME
			(V) AT OXNARD, PORT HUENEME AND SOMIS (ES)						
30	11	32	45.9	33 12.0	116 1.2	C	3.0	*	BORREGO MTN

AUG, 1965

1	16	2	29.1	33 14.5	116 6.4	C	2.9	*	BORREGO MTN
1	18	6	29.0	33 14.4	116 2.9	C	3.0	*	BORREGO MTN
7	16	34	7.2	36 1.6	117 57.9	B	3.0	*	HAIWEE RESERVOIR
8	22	33	15.4	34 10.5	117 27.8	C	2.4	7.9	SAN BERNARDINO
10	5	20	18.8	34 1.0	118 12.0	C	1.2	9.6	PASADENA
10	7	59	56.8	32 43.8	115 49.1	C	3.6	*	COYOTE WELLS
13	9	19	27.0	31 30.0	116 0.		4.4		SANTO TOMAS (M)
			EPICENTER BY USCGS						
13	9	28	32.0	31 24.0	115 54.0		4.0	16.0	VALLE TRINIDAD (M)
			EPICENTER BY USCGS						
13	13	0	18.7	34 20.1	117 8.0	B	2.6	*	LAKE ARROWHEAD
13	13	46	16.5	34 20.9	119 38.2	B	3.7	15.7	SANTA BARBARA
			(IV) AT CARPINTERIA AND SANTA BARBARA (ES)						
14	11	4	48.4	33 27.2	116 10.0	C	3.1	1.1	RABBIT PEAK
15	23	6	52.5	36 0.	121 12.0		4.0		KING CITY
			FELT, PAICINES (ES)						
19	15	4	53.3	34 4.2	118 18.9	B	2.4	6.8	HOLLYWOOD
			FELT, HOLLYWOOD AREA						
19	20	0	21.5	32 44.7	115 57.8	B	3.8	*	COYOTE WELLS
20	7	56	40.2	33 18.1	116 13.0	C	2.9	*	RABBIT PEAK
23	9	22	59.5	35 28.0	118 40.2	B	3.4	-2.7	BRECKENRIDGE MTN
26	4	29	24.2	33 13.7	116 4.1	C	2.9	*	BORREGO MTN
26	5	14	29.5	33 15.5	115 59.2	C	3.2	13.8	DURMID
26	5	28	7.5	33 12.9	116 3.7	B	3.0	3.1	BORREGO MTN
26	6	36	16.4	33 13.5	116 3.6	C	3.1	4.6	BORREGO MTN
26	9	38	28.4	31 53.5	116 24.9	C	3.5	*	SANTO TOMAS (M)
26	12	53	51.0	33 16.7	116 5.1	B	4.2	1.0	RABBIT PEAK
26	13	38	14.0	33 14.0	116 5.2	B	4.5	*	BORREGO MTN
			FELT, INDIO (ES)						
26	13	44	23.6	33 13.7	116 6.9	C	3.4	*	BORREGO MTN
26	13	45	24.9	33 15.4	116 6.2	C	3.5	*	RABBIT PEAK
26	13	46	34.7	33 12.1	116 0.8	C	3.8	*	BORREGO MTN

EARTHQUAKES IN SOUTHERN CALIFORNIA REGION, AUG, 1965

DA	H	M	S	LAT N	LONG W	Q	MAG	DEPTH	QUADRANGLE
26	13	49	26.7	33 14.8	116 4.6	C	3.9	-0.6	BORREGO MTN
27	10	1	16.8	33 8.2	115 56.0	C	2.8	*	KANE SPRING
27	10	11	14.7	33 10.9	115 59.3	C	3.0	*	KANE SPRING
29	17	25	1.8	33 27.6	116 31.1	B	2.9	-0.6	WARNER SPRINGS
30	21	13	11.4	33 12.4	116 2.9	C	3.4	*	BORREGO MTN
31	14	37	25.9	33 16.8	116 5.5	C	3.3	8.5	RABBIT PEAK

SEP, 1965

2	18	25	6.8	34 17.7	117 44.8	B	2.2	10.4	SAN ANTONIO
2	20	13	41.0	32 56.2	115 49.3	C	3.2	*	PLASTER CITY
3	1	20	27.2	32 55.0	117 34.6	C	3.1	-0.4	GULF OF SANTA CATALINA
6	18	0	57.8	35 57.8	120 3.3	C	3.4	35.2	KETTLEMAN PLAIN
10	14	55	15.7	34 21.9	117 37.3		3.5		SAN ANTONIO
			(IV) AT PINON HILLS (ES)						
11	15	59	7.2	34 8.9	116 27.7	C	3.1	*	JOSHUA TREE
12	1	59	9.9	34 12.0	117 15.9	B	2.8	*	SAN BERNARDINO
			FELT, SAN BERNARDINO AREA (PR)						
14	14	55	51.2	34 7.9	116 10.4	C	2.8	-0.8	TWENTYNINE PALMS
15	10	21	40.4	33 8.8	116 25.7	B	3.0	0.1	BORREGO
16	2	6	27.0	34 10.7	116 9.4	B	2.6	*	TWENTYNINE PALMS
19	15	42	7.8	35 59.2	120 2.3	C	4.8	*	KETTLEMAN PLAIN
			(V) AT ARMONA, AVENAS, CHOLAME, KETTLEMAN CITY AND STRATFORD (ES)						
20	15	44	36.0	34 50.6	118 54.5	C	2.7	8.3	FRAZIER MTN
21	11	24	18.8	34 48.1	117 59.8	B	2.9	2.0	ROGERS LAKE
22	21	49	25.9	37 25.0	118 28.7	C	4.5	7.7	BISHOP
			(IV) AT BENTON, BIG CREEK, BISHOP, DUNLAP, JUNE LAKE, KINGS CANYON NATIONAL PARK, MIRAMONTE, AND YOSEMITE NATIONAL PARK (ES)						
25	17	43	44.1	34 42.7	116 30.2	B	5.2	10.6	RODMAN MTS
			(VII) AT CAMP CADY RANCH (4 MI. SOUTH OF MANIX) (ES)						
25	17	48	2.4	34 42.7	116 28.5	C	4.9	4.8	LAVIC
			FELT, BARSTOW, SAN BERNARDINO AND TWENTYNINE PALMS						
			LIGHT AT PISGAH SUBSTATION (15 MI. WEST OF LUDLOW) (ES)						
25	18	6	33.7	34 41.4	116 30.2	C	3.3	*	RODMAN MTS
26	2	37	52.1	34 42.3	116 24.0	C	3.5	*	LAVIC
			FELT, PISGAH SUBSTATION (ES)						
26	7	0	1.7	34 42.7	116 1.6	C	5.0	8.3	LUDLOW
			(V) AT ANGELUS OAKS, BARSTOW, BIG BEAR CITY, FOREST FALLS, KELSO, LUCERNE VALLEY, NEWBERRY, PHELAN, PISGAH SUBSTATION, WILD (15 MI. S W OF BARSTOW), WRIGHTWOOD AND YERMO (ES)						
28	13	18	41.6	34 13.6	117 40.6	B	3.3	6.7	ONTARIO
28	13	47	5.7	34 13.7	117 41.2	B	2.6	7.1	ONTARIO
28	13	50	4.1	34 13.0	117 40.7	B	3.1	1.6	ONTARIO
29	14	10	26.3	32 8.8	115 59.1	C	3.3	*	LAGUNA SALADA (M)

OCT, 1965

2	17	7	5.0	34 31.7	118 48.8	B	3.0	18.0	COBBLESTONE MTN
5	6	13	10.9	33 55.1	118 39.1	B	2.8	10.9	SANTA MONICA BAY
9	8	42	55.2	34 4.0	117 31.1	B	2.1	5.0	ONTARIO
10	4	4	9.6	33 46.3	117 56.7	C	2.3	*	ANAHEIM
10	11	35	20.9	34 12.0	115 54.6	C	3.3	6.1	VALLEY MTN

EARTHQUAKES IN SOUTHERN CALIFORNIA REGION, OCT, 1965

DA	H	M	S	LAT N	LONG W	Q	MAG	DEPTH	QUADRANGLE
10	23	23	12.4	34 7.6	117 27.4	B	3.7	9.0	SAN BERNARDINO
			(V) AT BLOOMINGTON, CRESTLINE, FONTANA, MOUNT BALDY, PEDLEY AND WEST COVINA (ES)						
15	23	34	44.3	34 8.3	117 27.7	B	2.3	9.7	SAN BERNARDINO
17	9	45	19.0	33 58.5	116 46.5	B	4.9	17.0	BANNING
			(VI) AT CATHEDRAL CITY AND PALM SPRINGS (ES)						
17	12	35	51.8	33 59.4	116 45.5	B	3.0	17.6	BANNING
17	15	36	52.8	33 59.7	116 48.4	B	3.9	17.0	BANNING
			FELT, BIG BEAR CITY, PALM SPRINGS, RIVERSIDE, AND SAN BERNARDINO (ES)						
17	21	58	48.3	33 59.2	116 45.2	B	2.9	14.2	BANNING
18	3	44	20.3	33 58.2	116 46.1	B	2.8	19.1	BANNING
18	4	23	15.6	34 23.9	116 54.6	B	2.8	-1.4	LUCERNE VALLEY
18	12	5	42.4	33 59.9	116 46.8	C	2.8	*	BANNING
19	21	33	13.7	33 56.4	116 52.5	C	3.7	27.8	BANNING
			FELT, PALM SPRINGS (PR)						
19	21	36	49.7	32 5.7	115 50.9	C	3.8	*	LAGUNA SALADA (M)
20	1	16	43.8	33 58.6	116 45.7	B	3.5	16.0	BANNING
			FELT, PALM SPRINGS (PR)						
21	8	43	2.4	33 58.7	116 45.5	B	3.6	17.4	BANNING
			(VI) AT COACHELLA, WHITEWATER AND YUCAIPA (ES)						
21	10	25	15.8	33 58.3	116 47.5	B	3.1	10.9	BANNING
21	10	52	13.8	34 0.2	116 47.5	B	2.7	16.2	SAN GORGONIO MTN
22	1	41	33.8	34 8.6	117 26.6	B	3.3	8.0	SAN BERNARDINO
			FELT, SAN BERNARDINO AND VICINITY (ES)						
23	1	30	29.1	34 57.9	118 57.1	C	2.8	*	FRAZIER MTN
23	19	39	54.7	33 59.3	116 44.9	B	3.4	17.5	PALM SPRINGS
25	9	25	51.0	31 30.0	114 48.0		4.3		ISLA MONTAGUE (M)
			EPICENTER BY USCGS						
30	23	3	33.1	33 57.9	116 47.0	B	3.0	17.7	BANNING
31	11	5	47.6	34 1.3	117 28.9	B	2.3	6.9	SAN BERNARDINO
31	21	56	15.8	34 13.3	117 22.9	B	3.5	4.8	SAN BERNARDINO
			FELT, DEVORE AND SAN BERNARDINO (ES)						

NOV, 1965

1	7	16	34.4	34 28.3	116 29.7	B	2.7	2.3	EMERSON LAKE
1	17	10	16.3	37 18.0	118 30.0		4.1		MT TOM
			EPICENTER BY USCGS						
2	12	41	1.9	33 24.7	116 19.4	B	3.7	0.4	CLARK LAKE
			(IV) AT THERMAL (ES)						
7	10	46	39.2	33 46.2	115 55.5	B	2.8	3.1	PINKHAM WELL
10	21	1	35.3	34 4.5	118 34.9	B	3.0	4.0	CALABASAS
			FELT, HOLLYWOOD, SAN FERNANDO VALLEY AND SANTA MONICA (ES)						
12	21	3	27.8	32 42.3	115 53.8	C	3.7	-1.0	COYOTE WELLS
12	23	55	9.8	33 58.8	118 23.5	B	3.0	6.0	TORRANCE
			(VI) IN GLENDALE AND DOWNTOWN LOS ANGELES (ES)						
17	2	46	3.9	34 13.8	116 38.1	C	2.1	14.4	MORONGO VALLEY
17	9	2	2.5	34 28.8	116 31.1	B	3.0	-0.3	OLD WOMAN SPRINGS
17	10	45	2.2	34 30.7	116 39.9	C	2.3		RODMAN MTS
17	11	13	2.4	34 29.8	116 36.1	C	2.1	*	OLD WOMAN SPRINGS
17	20	10	32.5	33 58.9	116 52.5	B	3.3	25.2	BANNING
21	17	55	2.8	35 15.7	118 48.9	B	3.1	-1.5	BAKERSFIELD EAST
21	18	25	12.7	35 48.2	118 3.5	B	3.0	4.2	LAMONT PEAK

EARTHQUAKES IN SOUTHERN CALIFORNIA REGION, NOV, 1965

DA	H	M	S	LAT N	LONG W	Q	MAG	DEPTH	QUADRANGLE
22	8	22	57.1	35 13.1	117 0.1	C	2.8	8.7	OPAL MTN
22	19	44	4.9	34 10.6	118 48.6	C	2.8	16.2	TRIUNFO PASS
27	4	34	41.0	33 17.0	115 46.0	C	2.8	10.0	DURMID
30	8	43	25.1	32 47.8	116 3.3	C	4.0	16.4	CARRIZO MTN

DEC, 1965

3	7	34	59.3	35 19.3	118 29.4	B	3.6	7.8	EMERALD MTN
			(IV) AT KEENE (ES)						
3	7	41	53.2	35 20.1	118 28.7	B	2.7	0.9	EMERALD MTN
3	7	43	56.2	35 20.4	118 28.4	B	2.7	2.5	EMERALD MTN
3	22	49	51.9	34 13.5	117 4.6	B	3.7	-0.9	REDLANDS
			FELT, SAN BERNARDINO AREA (PR)						
8	2	25	18.9	35 9.1	118 39.1	B	2.8	1.7	CUMMINGS MTN
9	10	55	1.1	34 6.3	118 41.3	B	2.7	11.1	CALABASAS
9	16	50	59.4	35 5.6	118 57.0	B	3.0	1.0	ARVIN
11	7	54	6.6	34 1.7	116 41.8	B	3.1	8.0	MORONGO VALLEY
11	18	9	6.6	35 18.7	118 30.9	B	3.4	2.4	BRECKENRIDGE MTN
			(V) AT KEENE (ES)						
14	11	39	33.6	35 58.0	117 43.6	C	2.2	50.0	MOUNTAIN SPRINGS CANYON
17	19	24	15.7	34 31.4	116 28.4	B	2.9	-1.9	LAVIC
22	13	41	13.5	35 24.7	119 19.6	B	3.4	8.6	BUTTONWILLOW
24	5	47	36.2	35 47.4	116 52.5	C	2.8	*	WINGATE WASH
25	4	44	6.0	35 19.0	118 31.0	C	2.9		BRECKENRIDGE MTN
25	4	47	56.5	35 18.8	118 30.7	B	2.6	4.0	BRECKENRIDGE MTN
25	15	38	38.3	35 49.3	116 47.5	C	3.5	8.1	WINGATE WASH
25	15	43	18.9	35 46.6	116 49.8	C	2.8	*	WINGATE WASH
25	15	48	37.4	35 44.4	116 54.9	C	2.9	*	QUAIL MTS
25	16	9	44.3	35 49.2	116 48.4	C	3.6	4.7	WINGATE WASH
25	16	49	39.1	35 42.2	116 58.4	C	2.8	*	QUAIL MTS
25	21	37	27.3	35 48.8	116 50.6	C	2.8	9.4	WINGATE WASH
26	7	44	54.4	35 46.2	116 53.7	C	2.6	*	WINGATE WASH
26	13	27	35.8	33 55.3	118 57.5	C	2.8	16.6	OFF POINT DUME
26	14	25	0.9	33 19.6	116 43.2	B	3.7	1.3	WARNER SPRINGS
27	3	15	39.0	35 47.9	116 48.4	C	3.6	*	WINGATE WASH
27	23	7	13.4	35 46.4	116 54.6	C	3.2	*	WINGATE WASH
28	15	37	11.5	35 45.8	116 53.4	C	3.5	-1.9	WINGATE WASH
28	15	51	21.5	35 47.5	116 52.2	C	3.4	*	WINGATE WASH
30	16	30	34.9	33 34.3	116 33.3	C	3.3	7.6	IDYLLWILD

EARTHQUAKES IN SOUTHERN CALIFORNIA REGION, JAN, 1966

DA	H	M	S	LAT N	LONG W	Q	MAG	DEPTH	QUACRANGLE
7	11	59	58.3	33 55.8	117 56.5	B	2.3	10.6	ANAHEIM
7	19	10	23.0	33 16.7	116 14.9	B	4.0	-1.7	RABBIT PEAK
8	5	30	58.0	33 0.	116 0.	D	3.3		BORREGO MTN
11	0	32	12.0	33 45.7	116 5.1	B	3.2	2.2	LOST HORSE MTN
11	19	15	25.6	35 26.9	118 42.5	B	3.0	-1.9	BRECKENRIDGE MTN
13	3	40	38.6	36 6.3	117 52.5	B	3.1	3.9	HAIWEE RESERVOIR
13	3	46	38.0	36 5.8	117 51.4	B	2.7	6.2	HAIWEE RESERVOIR
14	1	53	35.7	33 48.1	117 42.4	B	3.0	5.3	CORONA
			FELT IN CRANGE COUNTY (PR)						
14	15	14	26.1	35 7.3	118 35.9	B	2.7	2.4	CUMMINGS MTN
16	3	24	0.5	34 52.3	118 54.1	B	2.6	14.3	FRAZIER MTN
16	14	44	38.9	35 23.4	117 43.7	B	3.3	6.2	RANDSBURG
18	7	41	52.5	36 25.8	117 58.8	B	3.0	*	KEELER
19	3	6	25.4	35 28.1	118 38.9	B	3.3	-1.1	BRECKENRIDGE MTN
21	13	35	51.3	32 21.5	116 18.0	B	3.3	3.0	SIERRA JUAREZ NW (M)
22	2	19	46.9	34 12.7	116 29.4	B	3.5	14.2	JOSHUA TREE
22	3	17	30.6	35 35.0	118 24.6	B	3.0	6.0	ISABELLA
			FELT, KERNVILLE						
23	14	57	10.8	34 32.4	116 38.8	B	2.9	-1.6	RODMAN MTS
25	17	34	35.7	35 17.0	118 31.1	B	2.8	*	BRECKENRIDGE MTN
26	21	45	7.0	33 10.2	116 30.1	B	3.3	*	SANTA YSABEL
			FELT, BOREGO STATE PARK AND CULP VALLEY (PR)						
28	1	49	49.4	35 50.3	120 9.8	B	3.5	*	KETTLEMAN PLAIN
28	19	37	46.0	36 26.4	118 1.7	C	2.8	5.5	OLANCHA

FEB, 1966

5	21	20	17.6	35 18.8	118 32.7	B	3.0	1.3	BRECKENRIDGE MTN
7	17	55	34.7	36 28.0	117 49.4	B	3.4	16.0	KEELER
9	4	0	17.4	34 33.4	118 56.4	B	2.5	1.6	COBBLESTONE MTN
11	8	7	37.0	34 20.8	118 44.4	B	2.9	10.3	SANTA SUSANA
12	15	23	15.4	33 10.0	116 36.8	C	3.1	*	SANTA YSABEL
13	14	34	48.4	33 9.4	116 29.0	B	3.5	3.4	BORREGO
14	10	57	48.6	33 15.7	116 9.1	C	3.6	*	RABBIT PEAK
15	0	35	50.0	34 14.2	117 5.2	B	2.5	*	REDLANDS
16	5	37	12.0	33 48.5	118 3.6	B	2.9	10.8	DOWNEY
			FELT, LONG BEACH AND LAKEWOOD (PR)						
16	5	40	20.1	33 46.5	118 5.0	B	2.3	10.1	DOWNEY
17	7	34	16.8	33 52.2	117 48.6	B	2.6	0.2	ANAHEIM
19	2	42	11.5	33 46.1	116 12.2	C	2.6	0.4	LOST HORSE MTN
23	6	59	47.5	34 23.9	119 20.0	C	3.0	14.0	VENTURA
23	22	0	13.1	35 3.1	118 44.3	B	2.7	1.4	CUMMINGS MTN
24	8	24	51.1	31 43.0	114 36.9	C	4.3	6.8	ISLA MONTAGUE (M)

MAR, 1966

4	10	52	40.2	32 50.5	115 37.0	C	3.5	7.4	BRAWLEY
4	12	40	6.1	32 51.6	115 32.3	B	3.6	*	BRAWLEY
			SURFACE FAULTING ON IMPERIAL FAULT FOR 10 KM.						
			FELT, EL CENTRO (PR)						
4	14	24	47.2	32 40.5	115 33.3	C	3.3	-0.5	HEBER
			FELT, EL CENTRO (PR)						
9	21	23	9.4	35 25.2	118 23.9	B	3.5	*	EMERALD MTN
10	0	0	44.0	32 53.1	117 11.4	C	3.2	48.7	LA JOLLA
			(IV)IN SAN DIEGO (PR)						

EARTHQUAKES IN SOUTHERN CALIFORNIA REGION, MAR, 1966

DA	H	M	S	LAT N	LONG W	Q	MAG	DEPTH	QUADRANGLE
11	16	24	57.4	34 54.2	116 36.4	C	3.0	1.4	NEWBERRY
12	13	26	23.5	34 54.7	116 35.3	C	3.3	*	NEWBERRY
13	15	41	17.4	35 25.7	118 23.6	B	3.1	3.1	EMERALD MTN
14	15	11	2.1	34 3.6	117 10.4	B	2.5	-0.3	REDLANDS
15	21	53	59.8	33 20.1	116 19.5	B	2.9	16.9	CLARK LAKE
19	14	21	56.0	33 17.5	116 19.0	C	4.0	10.9	CLARK LAKE
31	11	49	11.3	34 10.1	117 18.2	B	3.1	6.8	SAN BERNARDINO
			FELT, SAN BERNARDINO (PR)						

APR, 1966

2	11	7	29.9	34 0.1	117 30.7	B	2.5	6.8	ONTARIO
2	14	20	26.0	34 13.9	117 4.9	B	2.0	6.5	REDLANDS
6	9	20	11.1	33 51.3	118 10.5	B	2.4	2.2	DOWNEY
8	9	31	27.0	34 22.3	116 55.4	B	2.9	1.9	LUCERNE VALLEY
14	18	0	56.1	34 8.0	117 26.2	C	2.3	*	SAN BERNARDINO
15	8	36	58.7	34 31.5	118 37.1	B	2.3	10.8	LIEBRE MTN
16	14	10	55.5	35 3.3	119 6.7	B	3.0	4.8	CONNER
17	7	4	19.1	37 14.2	118 43.9	C	4.0	-0.2	MT GODDARD
			FELT, MAMMOTH LAKES (PH)						
17	7	20	20.6	37 18.9	118 34.8	C	2.3	9.0	MT TOM
18	6	49	31.4	36 28.4	118 16.0	C	3.5	*	KERN PEAK
18	9	21	20.1	33 59.8	116 39.2	B	3.5	10.9	PALM SPRINGS
			FELT, PALM SPRINGS AREA (PR)						
24	22	44	49.9	35 21.1	118 32.7	C	2.8	19.0	BRECKENRIDGE MTN
28	7	2	49.3	34 21.4	118 43.1	B	2.2	6.5	SANTA SUSANA
29	10	1	46.7	37 24.6	118 48.5	C	3.5	-0.5	MT ABBOT

MAY, 1966

3	3	12	0.6	34 53.8	118 59.7	B	2.8	12.5	FRAZIER MTN
			FELT, FORT TEJON						
3	8	16	55.0	31 18.0	114 6.0		4.3		GOLFO DE CALIFORNIA (M)
			EPICENTER BY USCGS						
6	7	46	11.3	32 5.6	116 15.2	C	3.6	*	SIERRA JUAREZ NW (M)
7	3	26	57.4	32 6.1	116 15.5	C	4.5	12.7	SIERRA JUAREZ NW (M)
7	11	47	46.1	34 19.7	118 15.8	B	2.3	*	SAN FERNANDO
15	7	17	26.1	33 57.9	119 47.1	B	2.8	5.7	SANTA CRUZ I SW
15	9	12	52.5	34 3.1	116 43.9	B	3.1	0.7	MORONGO VALLEY
15	9	33	32.3	34 6.6	116 43.4	B	3.2	*	MORONGO VALLEY
20	7	31	9.5	36 1.7	117 23.5	B	3.5	*	MATURANGO PEAK
26	20	33	22.0	31 24.0	115 42.0		4.8	33.0	VALLE TRINIDAD (M)
			EPICENTER BY USCGS						
27	20	17	6.5	33 36.6	118 4.8	C	2.7	25.2	LAS BOLSAS
28	4	26	12.6	35 20.5	118 55.5	B	3.0	1.7	BAKERSFIELD EAST
30	6	42	6.4	34 16.0	118 28.5	B	2.4	9.7	SAN FERNANDO
30	8	21	50.5	33 31.8	118 1.3	C	2.5	22.9	LAS BOLSAS
31	11	22	11.0	33 56.4	117 19.4	B	3.0	11.3	RIVERSIDE

JUN, 1966

1	12	28	16.3	37 37.7	117 51.9	C	3.2	5.1	SILVER PEAK SW (N)
5	0	36	41.9	34 14.7	119 26.1	C	2.0	14.5	ANACAPA I NORTH
5	20	6	1.1	35 18.8	118 32.0	B	2.9	6.1	BRECKENRIDGE MTN

EARTHQUAKES IN SOUTHERN CALIFORNIA REGION, JUN, 1966

DA	H	M	S	LAT N	LONG W	Q	MAG	DEPTH	QUADRANGLE
6	6	16	43.1	33 59.7	117 20.0	B	3.0	18.8	RIVERSIDE
7	16	38	33.0	33 33.3	116 30.2	C	3.4	7.1	IDYLLWILD
12	5	25	3.9	35 21.1	118 32.5	B	2.7	8.0	BRECKENRIDGE MTN
13	21	5	36.9	33 44.8	117 59.5	B	3.5	11.3	SANTA ANA
			FELT, BUENA PARK, LAKEWOOD, SANTA ANA, GARDEN GROVE, HUNTINGTON BEACH, EAST LONG BEACH AND ANAHEIM						
16	22	35	41.9	33 49.3	119 11.2	C	2.5	*	OFF POINT MUGU
18	1	24	28.0	34 52.1	116 42.1	B	3.0	3.6	NEWBERRY
21	9	46	25.9	34 51.4	120 28.2	C	4.1	2.1	SANTA MARIA
21	13	9	56.5	34 11.1	118 1.5	C	1.8	8.7	PASADENA
23	18	54	21.0	33 20.8	117 48.7	B	3.4	1.3	GULF OF SANTA CATALINA
25	9	50	4.1	34 13.5	117 2.8	B	2.3	8.6	REDLANDS
26	13	47	8.7	35 13.2	118 53.3	B	2.9	*	ARVIN
27	1	23	21.6	34 9.8	117 4.5	B	2.1	-0.1	REDLANDS
27	14	15	30.7	33 44.4	116 49.2	C	3.0	8.7	HEMET
28	1	0	33.8	35 50.0	120 15.2	C	3.5	*	PARKFIELD
28	4	8	57.7	35 46.6	120 17.6	C	4.7	-1.4	PARKFIELD
			FELT, PARKFIELD						
28	4	18	36.3	35 52.2	120 22.6	B	3.2	5.6	PARKFIELD
28	4	26	13.6	35 54.9	120 32.0	B	5.6	18.6	SAN MIGUEL
			SURFACE FAULTING ON SAN ANDREAS FAULT FOR 35 KM. DAMAGE IN PARKFIELD AREA (PR)						
28	4	32	48.0	35 48.9	120 16.8	C	4.0	*	PARKFIELD
28	4	35	5.2	35 54.9	119 52.4	C	3.1	11.1	LA RAMBLA
28	4	35	22.0	35 42.3	120 20.1	C	4.1	1.2	SHANDON
28	4	39	7.4	35 51.7	120 15.2	C	3.5	*	PARKFIELD
28	4	46	19.0	35 48.9	120 24.9	C	3.1	*	PARKFIELD
28	5	1	3.1	35 50.6	120 14.7	C	3.6	-1.2	KETTLEMAN PLAIN
28	5	12	43.6	35 56.7	120 23.5	C	2.9	*	PARKFIELD
28	5	46	1.3	35 52.6	120 15.7	C	3.7	2.3	PARKFIELD
28	6	32	18.3	35 51.1	120 24.2	C	3.8	3.5	PARKFIELD
28	7	45	46.9	36 3.2	120 24.1	C	3.0	*	COALINGA
28	10	19	26.9	35 7.3	118 56.2	C	2.3	*	ARVIN
28	13	48	22.7	35 42.5	120 0.5	C	3.3	7.6	ORCHARD PEAK
28	20	46	57.8	35 47.7	120 11.0	C	3.4	*	KETTLEMAN PLAIN
28	23	57	24.3	35 48.2	120 11.4	C	3.4	0.4	KETTLEMAN PLAIN
29	2	19	43.8	35 44.8	120 5.4	A	4.1	6.5	ORCHARD PEAK
29	8	55	54.9	35 52.8	120 13.0	A	3.2	*	KETTLEMAN PLAIN
29	13	11	58.7	35 51.8	120 19.7	B	3.8	13.9	PARKFIELD
29	18	54	32.5	34 54.7	118 56.9	B	2.6	9.9	FRAZIER MTN
29	19	53	29.5	35 46.9	120 4.0	A	4.8	5.1	KETTLEMAN PLAIN
			FELT, PARKFIELD, COALINGA, FRESNO						
30	1	17	37.8	35 48.2	120 10.8	A	4.3	5.1	KETTLEMAN PLAIN

JUL, 1966

1	9	41	20.6	35 58.6	120 25.2	C	3.7	0.8	PARKFIELD
2	12	8	33.5	35 54.9	120 18.1	B	3.6	12.2	PARKFIELD
			FELT, PARKFIELD AREA						
2	12	16	15.4	35 42.0	120 13.8	B	3.2	*	ORCHARD PEAK
			FELT, PARKFIELD AREA						
2	12	25	6.8	35 46.6	120 13.9	C	3.1	-1.2	KETTLEMAN PLAIN
			FELT, PARKFIELD AREA						
3	20	22	24.2	35 57.5	120 32.8	C	3.2	*	SAN MIGUEL

EARTHQUAKES IN SOUTHERN CALIFORNIA REGION, JUL, 1966

DA	H	M	S	LAT N	LONG W	Q	MAG	DEPTH	QUADRANGLE
4	5	28	50.3	35 42.0	120 14.5	C	2.9	*	ORCHARD PEAK
5	18	54	57.2	35 55.4	120 23.9	C	3.2	7.8	PARKFIELD
			FELT, PARKFIELD AREA						
5	22	30	20.3	35 24.7	118 26.5	B	2.9	3.2	EMERALD MTN
8	7	28	8.4	34 23.1	116 51.4	C	2.6	*	LUCERNE VALLEY
10	15	59	51.6	34 37.1	116 29.6	B	2.9	*	LAVIC
15	9	47	18.6	35 25.9	117 47.1	C	3.3	*	SALTDALE
15	10	9	43.0	35 23.3	117 47.0	B	4.0	4.7	SALTDALE
15	10	17	34.8	35 25.6	117 42.5	C	3.0	*	RANDSBURG
15	10	42	30.4	35 25.2	117 45.0	B	3.0	*	SALTDALE
15	11	4	52.1	33 53.8	117 22.2	B	2.3	11.8	RIVERSIDE
23	7	15	8.2	35 46.1	118 6.6	B	3.1	21.8	LAMONT PEAK
28	2	49	57.4	37 9.6	118 8.8	B	2.7	11.4	WAUCOBA MTN
28	13	15	3.6	34 14.0	117 37.1	B	2.6	5.7	ONTARIO
				AUG, 1966					
1	12	5	34.5	35 43.3	120 14.4	B	3.3	-1.1	ORCHARD PEAK
3	9	41	36.4	35 58.7	120 22.6	B	3.3	-1.8	PARKFIELD
3	12	39	4.3	35 45.8	120 29.3	C	3.9	5.8	PARKFIELD
3	20	55	5.4	32 45.7	118 7.1	C	3.0	7.7	GULF OF SANTA CATALINA
4	8	38	46.8	35 15.9	118 40.7	B	2.7	8.9	BRECKENRIDGE MTN
7	0	23	51.1	32 41.6	117 58.7	C	3.7	-0.9	GULF OF SANTA CATALINA
7	17	3	24.1	35 54.4	120 28.3	C	3.5	2.8	PARKFIELD
7	17	36	26.7	31 48.0	114 30.0	D	6.3		ISLA MONTAGUE (M)
			EPICENTER BY USCGS						
			FELT,PHOENIX, SAN DIEGO, YUMA AND DOWNTOWN LOS ANGELES (PR)						
9	8	26	41.1	35 25.7	118 39.4	B	3.3	1.6	BRECKENRIDGE MTN
10	17	45	46.0	31 18.0	114 24.0		4.3	33.0	GOLFO DE CALIFORNIA (M)
			EPICENTER BY USCGS						
10	18	10	12.4	34 9.0	118 0.0	B	2.3	*	PASADENA
11	2	43	45.3	34 9.1	118 0.1	C	1.3	0.1	PASADENA
14	15	5	2.8	34 0.4	117 21.4	B	2.8	19.3	SAN BERNARDINO
17	5	30	49.1	33 17.0	117 5.9	B	2.4	*	PALA
19	22	51	20.5	35 49.1	120 21.1	C	3.5	*	PARKFIELD
21	2	24	16.0	35 18.3	119 15.1	C	3.1	11.1	BUTTONWILLOW
25	5	54	6.3	33 3.1	116 26.4	B	3.0	1.0	BORREGO
30	5	56	7.8	34 1.0	118 29.7	B	2.6	16.4	HOLLYWOOD
			FELT, SANTA MONICA AREA (PR)						
31	8	19	44.1	33 5.0	116 3.0	B	3.1	3.3	BORREGO MTN
				SEP, 1966					
2	11	6	29.9	34 6.8	117 25.5	B	3.7	7.9	SAN BERNARDINO
			FELT, SAN BERNARDINO, RIVERSIDE, REDLANDS, FONTANA, RIALTO						
2	11	55	12.5	34 8.1	117 25.4	B	1.7	8.7	SAN BERNARDINO
			PROBABLY FELT, FONTANA (PH)						
2	11	58	12.9	34 8.2	117 22.3	B	2.2	7.0	SAN BERNARDINO
			PROBABLY FELT, FONTANA (PH)						
2	15	21	20.7	34 6.4	117 26.3	B	2.5	10.3	SAN BERNARDINO
2	17	47	46.2	34 7.6	117 25.3	B	3.4	8.6	SAN BERNARDINO
			FELT, FONTANA, RIVERSIDE, SAN BERNARDINO (PR)						
3	1	42	2.2	34 5.4	117 26.8	B	2.6	9.7	SAN BERNARDINO
4	4	38	41.4	33 56.3	118 31.5	B	2.7	10.5	SANTA MONICA BAY

EARTHQUAKES IN SOUTHERN CALIFORNIA REGION, SEP, 1966

DA	H	M	S	LAT N	LONG W	Q	MAG	DEPTH	QUADRANGLE
5	10	20	43.0	33 53.0	118 29.0	B	2.4	*	TORRANCE
6	7	12	1.5	31 24.0	114 24.0		4.7	33.0	GOLFO DE CALIFORNIA (M)
			EPICENTER BY USCGS						
7	0	20	52.7	36 0.7	120 2.6	C	3.4	*	POLVADERO GAP
9	1	12	28.4	34 0.8	116 23.8	B	3.1	11.7	JOSHUA TREE
11	5	33	19.9	34 2.5	117 8.3	B	2.6	*	REDLANDS
12	13	17	29.1	33 57.5	118 33.5	B	3.4	13.2	SANTA MONICA BAY
			FELT, SANTA MONICA AREA (PR)						
12	23	39	1.6	33 59.6	118 33.7	B	3.2	5.0	SANTA MONICA BAY
14	20	47	41.4	33 7.7	116 16.9	C	3.3	2.0	BORREGO
16	14	55	43.1	34 27.4	116 57.2	B	3.0	*	LUCERNE VALLEY
16	22	54	11.4	33 9.5	116 29.9	C	3.4	-1.2	BORREGO
17	6	13	19.6	33 18.1	118 2.9	C	2.8	2.8	GULF OF SANTA CATALINA
17	22	34	4.6	33 11.0	115 43.2	C	2.9	4.7	CALIPATRIA
18	3	14	39.5	35 55.1	117 57.7	C	3.1	*	LITTLE LAKE
24	2	49	28.7	34 17.9	118 21.4	C	2.4	*	SAN FERNANDO
26	23	5	42.5	34 8.8	118 51.6	C	2.0	1.6	TRIUNFO PASS
27	1	43	36.4	35 6.8	118 29.9	B	3.0	7.5	TEHACHAPI
28	5	30	4.2	34 46.0	120 29.7	C	2.8	9.6	SANTA MARIA

OCT, 1966

1	1	7	11.6	33 57.6	118 48.2	C	2.3	*	OFF POINT DUME
2	2	23	6.9	34 6.5	118 6.4	B	2.1	7.3	PASADENA
2	5	12	34.5	33 58.1	118 19.6	B	3.5	1.9	TORRANCE
			FELT, INGLEWOOD AND DOWNTOWN AND WILSHIRE DISTRICTS OF LOS ANGELES (PR)						
2	10	58	18.6	34 22.0	119 40.0	C	3.0	18.6	SANTA BARBARA
3	8	33	3.0	34 17.4	118 30.8	C	2.0	0.6	SANTA SUSANA
4	9	17	6.8	34 40.2	119 8.6	B	3.0	17.5	TOPATOPA MTS
5	12	29	49.3	34 24.2	116 31.6	B	3.3	-1.8	OLD WOMAN SPRINGS
8	0	49	52.1	34 45.4	116 14.0	B	2.6	0.6	BROADWELL LAKE
8	12	33	23.3	33 58.1	116 36.6	B	3.0	5.7	PALM SPRINGS
11	16	59	12.9	35 6.4	117 20.8	B	4.4	6.5	FREMONT PEAK
			FELT, BARSTOW, EDWARDS AIR FORCE BASE AND DOWNTOWN LOS ANGELES						
12	2	23	24.0	33 41.1	117 57.0	C	2.4	9.7	SANTA ANA
13	17	10	57.8	34 56.5	116 58.8	B	3.1	*	DAGGETT
16	13	13	37.4	35 45.4	117 48.2	C	2.7	14.9	LITTLE LAKE
19	20	54	35.9	33 56.2	118 31.1	C	2.1	-0.4	SANTA MONICA BAY
20	3	13	38.9	33 0.9	115 45.1	C	3.5	*	KANE SPRING
20	10	35	43.6	33 12.3	115 51.7	C	3.2	*	KANE SPRING
20	14	25	40.2	35 8.2	117 20.9	B	3.8	-1.0	FREMONT PEAK
20	14	37	32.6	35 9.1	117 20.0	B	2.7	3.3	FREMONT PEAK
21	5	8	25.0	34 7.1	117 25.4	B	2.3	*	SAN BERNARDINO
23	9	24	40.1	34 12.2	119 13.6	C	2.5	9.7	HUENEME
27	12	6	1.3	35 56.9	120 41.4	C	4.2	10.7	SAN MIGUEL
			STRONG AT PARKFIELD						

NOV, 1966

2	15	36	38.3	34 1.3	118 27.6	C	2.0	8.6	HOLLYWOOD
3	11	15	41.9	35 31.2	118 24.1	B	3.0	2.9	ISABELLA
3	11	16	55.7	35 32.2	118 23.9	B	3.0	*	ISABELLA

EARTHQUAKES IN SOUTHERN CALIFORNIA REGION, NOV, 1966

DA	H	M	S	LAT N	LONG W	Q	MAG	DEPTH	QUADRANGLE
5	5	18	16.7	31 34.6	115 50.5	C	4.7	1.5	SIERRA JUAREZ SE (M)
5	13	31	30.4	35 54.0	120 30.0		3.4	15.0	SAN MIGUEL
			EPICENTER BY USCGS						
8	20	17	55.7	33 45.3	117 7.6	B	2.8	18.0	PERRIS
9	3	8	36.8	35 32.5	118 24.1	B	2.7	*	ISABELLA
9	15	37	50.0	35 32.3	118 24.2	C	2.6	*	ISABELLA
13	0	30	48.3	35 19.8	118 33.8	B	2.9	0.3	BRECKENRIDGE MTN
14	6	49	13.6	35 15.8	118 37.1	B	2.8	*	BRECKENRIDGE MTN
15	5	29	3.1	31 41.7	115 16.1	C	4.2	*	SIERRA TINAJA (M)
15	17	27	52.1	34 56.6	116 38.7	B	3.0	-1.9	NEWBERRY
16	23	48	30.5	35 42.5	118 26.6	B	2.9	-1.4	ISABELLA
18	23	39	43.0	35 44.9	120 13.5	C	3.3	*	ORCHARD PEAK
21	12	36	31.1	34 25.2	116 48.2	B	2.8	0.2	LUCERNE VALLEY
21	13	37	35.2	34 23.4	116 50.2	B	2.6	6.0	LUCERNE VALLEY
21	13	48	45.0	34 25.9	116 49.2	B	3.4	1.2	LUCERNE VALLEY
				DEC, 1966					
14	14	39	23.5	33 32.4	118 25.0	C	2.9	*	SAN PEDRO
20	23	23	46.3	33 57.7	118 50.5	B	3.3	10.1	OFF POINT DUME
21	15	20	17.5	33 33.4	118 20.4	C	2.9	*	SAN PEDRO
21	15	30	3.0	33 31.9	118 25.1	C	2.6	0.8	SAN PEDRO
22	1	48	57.5	33 37.5	118 17.2	C	2.6	13.9	SAN PEDRO
22	4	53	54.7	33 39.4	118 20.5	B	3.5	12.4	SAN PEDRO
23	8	49	36.4	33 33.2	118 20.5	C	2.3	5.7	SAN PEDRO
23	14	2	47.8	35 43.9	118 28.1	B	2.6	2.2	ISABELLA
26	22	58	53.7	33 59.6	118 35.8	B	3.6	10.0	SANTA MONICA BAY
			FELT, SANTA MONICA BAY AREA (PR)						
27	11	18	12.3	33 57.5	118 37.8	B	2.9	0.6	SANTA MONICA BAY
29	22	49	39.4	34 1.8	117 32.1	B	2.4	2.7	ONTARIO